

COMMERCIAL CAR JOURNAL

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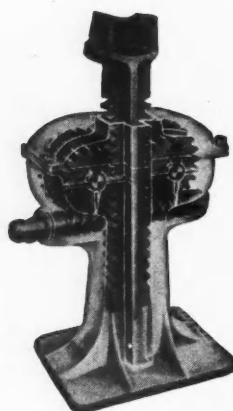
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Now made by **WALKER MANUFACTURING COMPANY** Racine, Wisconsin

January, 1932

The Commercial Car Journal

THE PRESIDENT'S PAGE

COMMERCIAL CAR JOURNAL

PHILADELPHIA

PENNA.

JANUARY, 1932

VOL. XLII, No. 5



Truck Makers, Who Through Hard Thinking and Intelligent Planning Have Weathered the Slack Period, Will Play an Important Role in Our Return to Normalcy

By *A.G. Bean*
PRESIDENT
The White Company



WE have just passed through two long years which have demanded hard thinking and intelligent planning. What the future has in store for us depends largely upon how well we can adapt to our particular needs the lessons we have learned.

If we have carefully put our house in order during these lean days we come to 1932 with stronger organizations, operating at lower costs, equipped to seek new markets and prepare to return to the fundamentals of manufacturing and selling which we lost

sight of during a period of sensational prosperity.

Well established manufacturers of trucks and motor coaches will play an important role in our return to normalcy. Transportation and distribution over the highways has within the short space of 10 years grown to be an integral part of our economic structure. Highway transportation is a part of every business, whether large or small. The food we eat, the clothes we wear, the building materials used in our houses, in fact everything

that is sold is transported on the highway at some time during production or distribution. Being such an important part of business it is only reasonable to presume that any betterment in general conditions will be quickly reflected in renewed buying of motor equipment.

Realizing the importance of highway transportation, manufacturers of motor equipment have always planned for the future, giving to business the means to expand into new trade

TURN TO PAGE 33, PLEASE

The following are excerpts from the opinion by Justice Cotillo in the case of Brockway Motor Truck Corp. vs. City of New York et al.

THE plaintiff in a taxpayer's action is seeking to restrain the defendants from receiving bids for furnishing and delivering motor-driven snow brooms to the department of sanitation of the city of New York and from making an award on the bids so received, and is also seeking to direct the defendants to prepare specifications for the said motor-driven snow brooms so that "assemblers" as well as "manufacturers" can bid for the said equipment. The commissioner of purchase for the city of New York is now advertising for bids for furnishing and delivering motor-driven snow brooms to the department of sanitation. The specifications for this equipment, of which the plaintiff is complaining, provide as follows:

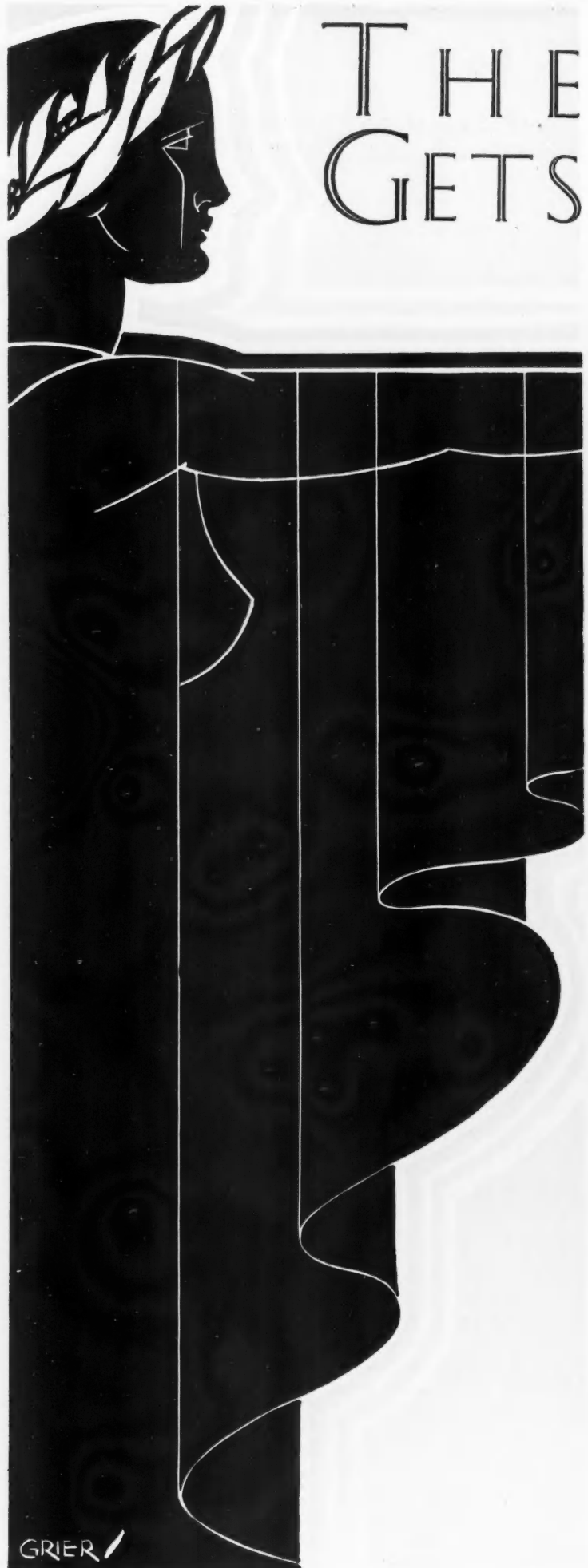
"(d) That the manufacturer of the chassis has in operation a factory adequate for and devoted to the manufacture of the MOTOR OR ENGINE, transmission, front and rear axle which it proposes to furnish in the chassis."

"(h) That the manufacturer of the chassis has been engaged in the continuous manufacture and advertised sale of motor truck chassis for at least ten years."

The plaintiff in this action is not a manufacturer within the meaning of said specifications but is what is called in the automobile trade an assembler. * * *

In its supporting affidavits plaintiff sets forth at great length that the language of the specifications shuts out from bidding an entire class of truck manufacturers, including the plaintiff, regarding whose facilities for making good on contracts and repairs and regarding whose financial ability there is no doubt. It shows as a corollary from these considerations, that the restricted competition tends to extravagance in price for a product in no way superior to that of the class shut out.

It is the contention of the city in reply, that the purpose of the aforesaid specifications is to obtain bids for motor-driven snow brooms from builders who furnish a chassis or motor which is made by a manufacturer and not by an assembler who assembles the chassis or motor from parts produced by other firms. The defendants also agree that it is the experience of the department of sanitation and its predecessor, the department of street cleaning, that makers of assembled trucks constantly change their source of supply for the principal parts used on the chassis and because of this fact do not have on hand a ready supply of repair parts, and that this inability to secure essential repair parts results in the disruption of the normal activities of the department and in many instances shortens the life of the equipment. In short, it is claimed that in making purchases from manufacturers of trucks as distinguished from assemblers, the city is assured of a more certain supply of parts for replacement.



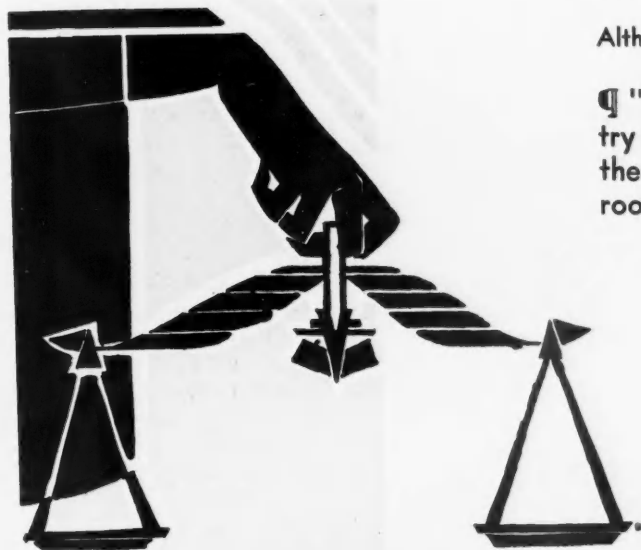
ASSEMBLED TRUCK JUDICIAL PRAISE

JUSTICE J. COTILLO

Of the Supreme Court of New York

Although denying Brockway's plea for a temporary injunction, says:

Q "I believe that the principle of specialization in this industry is conducive to better and more economic results than the principle of having a truck manufactured under one roof."



Supreme Court Justice J. Cotillo whose opinion is valued not only for its legal impartiality but because it is the viewpoint of a neutral who had the opportunity of hearing both sides of the "assembled vs. manufactured" question

In addition to this contention the city urges the financial instability of the assemblers and their transiency of life.

As to the first contention, the Court, while not pretending to qualify as an expert, is not entirely impressed with the argument of the superiority of manufactured trucks over assembled trucks, particularly in the matter of ease of replacement of parts. I believe that the principle of specialization in this industry is conducive to better and more economic results than the principle of having a truck manufactured under one roof.

From a reading of the opinions in the affidavits of the various experts, it seems to me that the term "manufactured completely within its own plant" and the term "assembled" are relative terms; that those who pursue the method referred to as the "production of manufactured types" use, to a substantial extent, the practice of purchasing certain parts from outside suppliers; that the difference between the two methods of manufacture is one of degree rather than fundamental, and that actually all motor trucks are manufactured much the same way. Does the manufacturer build his own truck? Does he not, as a matter of fact, whether he is of one type or the other, purchase numerous constituent, manufactured items? Does not the quality of the finished product depend rather upon coordinated engineering? With the modern facilities for specifying, testing and inspection, the desired quality of a unit can be produced and maintained by an independent manufacturer, and I do not but know that this method of manufacture or assembling provides the same quality of material and workmanship as is obtained by those who purport to manufacture completely within their own plant. The statistics submitted to me by the different experts indicate that while in the early days of the industry most automobile trucks were of the so-called "built under one roof" type, the tendency of recent years has been toward trucks designed

THE ASSEMBLED TRUCK GETS JUDICIAL PRAISE

and built to use units produced by specialists in the manufacture of such units.

An automotive vehicle is an intricate and highly refined piece of machinery; it has been developed rapidly and to a remarkably high degree of perfection. No one organization could possibly be responsible for so rapid and remarkable a development, which has been the result of the inventive genius and manufacturing refinement of the great body of automotive engineers. This applies to every part of the vehicle; that is to say, to the motor, to the axle, to the transmission, to the wheels and to many other minor components, such as carburetors, magnetos, spark plugs, universal joints, bearings, piston rings and countless other items. It is to the specialist in each line that the vehicle builder must look for improvement in the various components. As a matter of fact, the vehicle builder has a full task in assembling these component parts into a chassis, then equipping the chassis with a suitable body and finally marketing the body. A vehicle builder who would close his doors to the advances in the art of producing component parts would soon find himself producing a vehicle with obsolete parts; therefore, his alternative is to leave the production of many of the component parts to specialists.

● Maintenance Prolongs Life ●

If a manufactured vehicle were produced after the manner of Holmes's "wonderful one-hoss shay," all parts of which were co-eval with the life of the entire vehicle; a sound and irrefutable agreement in favor of the manufacture under one roof would exist. But it is undisputed that the life of a truck is prolonged by the constant replacement of perishable parts. In the matter of facility of replacement the argument of the assemblers seems much more plausible. * * *

As far as the financial ability of these assemblers is concerned and the fear expressed in the city affidavits that they would be unable to obtain the proper parts, it is only necessary to refer to several essential parts, to wit: the axle, the gears and the motors. The Timken Detroit Axle Company, * * * with a working capital of approximately \$20,000,000. The Brown-Lipe Gear Company is a corporation having upwards of \$16,000,000 working capital; and the Continental Motors Corporation, accord-

ing to Poors 1930 Manual, has a working capital of upwards of \$35,000,000. In these three essential parts alone a total working capital of \$71,000,000 is represented, and distribution and availability of parts is so universal and so well established, that the argument of the corporation counsel that part manufacturers and assemblers go out of business more frequently than manufacturers and assemblers is without force. * * *

● Court and "Discretion" ●

Perhaps a strict reading of the opinion of the Court of Appeals in *Talcott v. City of Buffalo*, 125 N. Y. 280, might lead to the conclusion that the discretion of public officials, unless the result of corruption, fraud, or bad faith amounting to fraud, should not be disturbed. On the other hand, that decision was handed down in 1891, and the financial undertakings of the city today are on a vastly larger scale. Besides, experience since that time has shown that the term "discretion" is apt to cover a multitude of sins. Judge Peckham, in the dissenting opinion in the *Talcott* case, has expressed the current economic attitude, which is confirmed by the experience of 40 years that have elapsed since it was written:

"Under the statute as it now reads, I think the court has jurisdiction to enjoin the performance of an act by a public officer of the kind mentioned therein, if it be of such a character as to necessarily result in a plain, bald, useless waste of the property or funds of the public. The act must be such that there can be no fair question, in the judgment of reasonable men, as to its character. It must be plainly and beyond all fair controversy wasteful; a mere squandering of public funds.

"In such case I do not think it necessary to allege or prove that a corrupt or fraudulent intent accompanies the act.

"Jurisdiction in the courts to enjoin such conduct on the part of public officers who are merely trustees for the public, would be, in my judgment, exceedingly healthful, and I think no strained construction of the statute is necessary to hold that such jurisdiction has been granted by it. * * *

In *People ex rel. Haecker Sterling Co. v. City of Buffalo*, 176 N. Y. Supp. 642, realtor applied for mandamus to compel the commissioner to award to it the contract to furnish nine tractors for use in connection with flusher trailers in cleaning the streets of the city, it being claimed that the

realtor was the lowest bidder.

The court, while denying the writ, reviewed certain principles applicable to a situation like the present one, which negatives the view that the discretion of the officials in refusing to make an award to a lowest bidder is an absolute one, or that they could arbitrarily reject such a bid under the cloak of the exercise of discretion. In that case it was decided that it was a proper exercise of judgment to give preference to a bidder which manufactured its own parts over the maker of an assembled car. * * *

In the present case the circumstances would seem to indicate the wisdom of an opposite conclusion. The manufacture of parts has become so standardized, that a wise economy would indicate the desirability of not excluding such manufacturers from bidding, particularly where it appears that such bids are apt to be lower than those of the manufacturers of entire cars, even if it should be that there are such makers in existence. The argument of convenience submitted by the defendant, based upon the facility of repair, seems to refute itself, in view of the vast distribution by manufacturers of parts and the large capital invested by them. Since the decision in the *Haecker Sterling* case in 1919, even those manufacturers who formerly fabricated all their parts, have become in large measure, assemblers. If the so-called self-subsisting manufacturer who has furnished certain machinery to the city should go out of business, the problem of replacement would be much more difficult than in the case of a car assembled from standardized parts.

● Arguments Powerful ●

While the plaintiff presents powerful and almost irrefutable arguments to sustain its contention of abuse of discretion resulting in probable waste, a temporary injunction should nevertheless not be granted in the present case. Such an injunction might hinder the city in the prosecution of its necessary activities, and by virtually forcing a change of specifications in advance of trial, would grant the plaintiff the full measure of relief which it could only obtain after a trial. In the situation I deem it more advisable to deny the motion on condition that the case be set down for an immediate trial on Dec. 7, 1931. The imminence of such a trial would seem to make it unnecessary to dispose of the motion on the merits unless the city should decline to proceed.

Motion disposed of as indicated. Settle order.

MORE AFFIDAVITS MUSTERED IN SPECIFICATIONS TUSSLE

New Statements Are Mobilized in Manufactured vs. Assembled Dispute When Brockway Assails N. Y. Dump Truck Specifications

By E. K. TITUS

Staff Writer, New York World-Telegram

WITH 774 White dump trucks and 162 flushers with Autocar chassis contracted for, the city of New York, late in December, was still locked in a court battle with Brockway Motor Truck Corp., which, with applause from other assemblers, is seeking to have specification by the city of a manufactured truck declared illegal.

Meantime more talented experts have tossed affidavits into the arena, and excitement over the battle has grown, with the realization that the New York City decision may affect municipal truck specifications throughout the country.

Events have followed thick and fast. On Nov. 20, while Brockway's suit challenging the right of the city to specify a manufactured chassis for motor-driven brooms, was still before the court, the Department of Sanitation issued specifications under which it proposed to spend \$2,543,094.61 for dump trucks and \$486,000 for flushers. These specifications contained a restrictive clause, calling for a manufactured chassis, similar to the clause whose legality was being tested. The clause follows:

"That the manufacturer of the chassis has in operation a factory adequate for and devoted to the manufacture of the motor, and completely controls the manufacture of the transmission and front and rear axles which it proposes to furnish in the chassis."

The phrase "completely controls the

manufacture of the transmission and front and rear axles," was construed as admitting General Motors, which was believed to have been excluded under the previous disputed motor broom specifications.

On Nov. 27, Supreme Court Justice Salvatore Cotillo handed down a decision in the motor-driven broom case, in which he held Brockway had presented "powerful and almost irrefutable arguments to sustain its contention of abuse of discretion resulting in probable waste." Justice Cotillo, whose complete decision is reproduced on page 14 of this issue, however, declined to issue a temporary injunction restraining the Department of Sanitation from proceeding with the disputed specifications. He took this course "on condition the case be

set down for an immediate trial."

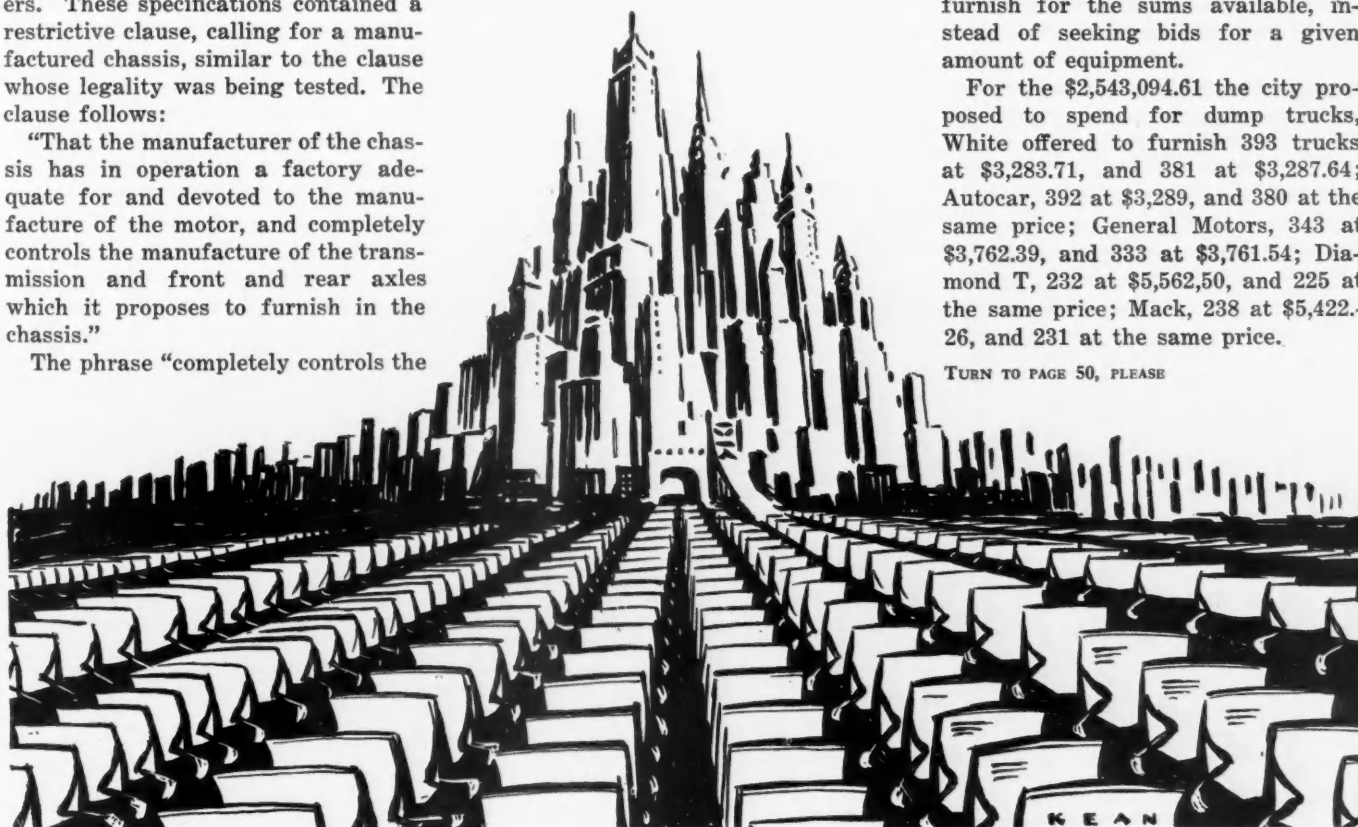
Dec. 1, while city officials were opening bids on what is said to be the largest municipal truck order since the war, members of the Sanitary Commission were served in a second suit by Brockway, challenging legality of the new specifications.

This did not deter the Sanitary Commission. Next day White and Autocar, low bidders, had their contracts. Officials expressed high satisfaction with the low prices they had been able to obtain. Commissioner Mathew F. Kenney, of the Department of Purchases, said low bids were \$1,000 lower for each piece of equipment than had ever been received before. White offered unit prices of \$3,283.71 and \$3,287.64 on the dump trucks, complete with specially designed body, and Autocar \$2,998 on the flushers.

The city reversed the usual procedure, asking bidders to tell the number of trucks and flushers they would furnish for the sums available, instead of seeking bids for a given amount of equipment.

For the \$2,543,094.61 the city proposed to spend for dump trucks, White offered to furnish 393 trucks at \$3,283.71, and 381 at \$3,287.64; Autocar, 392 at \$3,289, and 380 at the same price; General Motors, 343 at \$3,762.39, and 333 at \$3,761.54; Diamond T, 232 at \$5,562.50, and 225 at the same price; Mack, 238 at \$5,422.26, and 231 at the same price.

TURN TO PAGE 50, PLEASE



FLEETS HOLD 45% OF

Survey of Fleet Practice in 18 States Gives Fleet Operators Excellent Opportunity of Checking Their Shop Performance Against the Average

FLEET managers boss the job of maintaining their fleets, no matter how much or how little assistance they hire on the outside. To other shops all of them give some work but control of maintenance they keep to themselves. They decide when and where and how each job shall be done and who shall do it. Although this question of control was not asked directly in the questionnaire sent out by the S.A.E. committee the report leaves no room for reasonable doubt.

Control starts with, and is based upon, periodic inspection which forms a part of the now generally followed preventive maintenance policy. Nine out of every ten fleets reporting give their fleets periodic inspection, the periods ranging from weekly to 90 days. Inspection and lubrication are functions reserved by fleets in all but a small percentage of cases.

The question of unit replacement or general overhaul, which was third on the list, revealed that 20 per cent of the fleets use unit replacement, 58 per cent overhaul and the remainder, or 22 per cent, use a combination of the plans.

With these two general policies settled (for the time being only, if you insist) the table of percentages deserves attention and study. The classes of maintenance work are here listed in the order of general average percentage of work performed in the fleet shop, highest percentage at the top, lowest at the bottom. If fleets of various sizes followed this general average the figures in each vertical column would be progressively lower from top to bottom. Any break in this sequence shows at once that fleets of the number of vehicles in question do more or less maintenance work of the class than the general average. For illustration: carburetor repairs—small fleets do 77.5 per cent which is more than the two figures directly above and more than the general average of 59.0 per cent. Of course, figures for the various columns for a given class of work vary, as with lubrication, without throwing the sequence out of gear.

● Lubrication Heads List ●

Lubrication tops the list on general average and in all sizes of fleets except Large A, 51 to 200 vehicles, in

WORK DONE BY AVERAGE FLEET SHOP

	Small	Medium	Large A	Large B	Total
Lubricating	95.8	91.4	95.5	93.7	94.2
Brake adjusting	82.3	91.4	96.2	80.0	81.4
Rebuilding of engines, clutches, transmissions and rear ends ..	82.3	78.2	86.9	73.4	75.2
Electrical and steering unit repairs	82.3	57.2	71.1	74.7	74.1
Wheel and axle aligning	62.2	69.8	86.0	70.7	72.6
Brake lining	82.3	72.8	84.3	64.1	66.8
Painting	69.6	76.5	75.4	59.4	61.8
Truck body repairs	69.7	68.8	73.4	57.2	59.5
Carburetor repairs	77.5	70.4	66.8	57.5	59.0
Frame and axle straightening ..	24.3	51.6	62.8	55.5	56.3
Passenger car body repairs	32.5	27.2	47.5	42.6	43.0
Battery repairs	52.7	22.3	36.5	40.6	39.9
Glass replacement	25.7	39.0	52.6	37.0	39.0
Cylinder reboring	0.0	20.2	47.2	36.2	37.3
Tire and tube repairs	48.6	32.2	49.7	30.6	33.0
Upholstery repairs	0.0	20.4	31.8	32.2	31.9
Radiator repairs	40.5	29.2	30.6	27.4	27.8
Brake drum reconditioning	50.0	46.4	37.4	24.5	26.7
Body building	0.0	55.8	58.5	20.2	25.4
Spring repairs	45.9	22.3	35.6	21.2	23.2
Crankshaft grinding	0.0	12.5	19.6	9.4	10.7
Speedometer repairs	0.0	4.3	19.4	3.4	5.4
Not classified	25.7	24.6	23.4	10.8	12.7
Total	45.7	47.3	56.4	44.4	45.8

The figures showing percentage of maintenance work of each class performed in fleet shops are averages obtained by multiplying the number of vehicles in each fleet by the percentage for each class of work. This plan puts each class of work on an equal basis. Small fleets, column 1, contain 15 to 25 vehicles; medium fleets, 26 to 50 vehicles; Large A fleets comprise 51 to 200 vehicles, and Large B fleets have more than 200 vehicles. Mixed fleets of trucks and passenger cars are included in the tabulation, the total number of vehicles including 18,430 trucks and 11,073 passenger cars

ALL THEIR SERVICE



THIS SAVES YOU MONEY

A fleet manager with six months' leave of absence and a bankroll 4.12 in. in diameter could find out a lot of things he would like to know about how other fleet managers maintain their fleets. He could travel over the land calling on fleets, large and small, asking searching questions, inspecting garages and shops and then return filled with pride or envy as the case might be.

Fleet men are too busy these days to spare time or money for inspection tours but the equivalent of the imaginary trip is within reach of the most harassed fleet managers. This took the form of a survey of fleet maintenance conducted by a committee of the S.A.E., of which J. M. Orr, fleet manager, Equitable Auto Co., Pittsburgh, Pa., was chairman. This survey revealed maintenance practices of fleets situated in 18 states and provinces of the United States and Canada, operating in metropolitan, suburban and rural areas.

While the analysis here given is of specific interest to fleet men, dealers will find in it much that will guide them in going after repair work which fleets assign to outside shops. In this respect it is a supplement of the article, "All Fleets Hand Out Some Service," which appeared in the December issue.

which it is a close second to brake adjusting. As a matter of fact, more brake adjusting is done by fleets comprising 51 to 200 vehicles than any other classification of fleets and this figure is the highest percentage shown in the table.

TURN TO NEXT PAGE, PLEASE

FLEETS HOLD 45 % OF ALL THEIR SERVICE

Small fleets do no cylinder rebor-ing, crankshaft grinding, upholstery work, speedometer repairing or body building, but they do certain classes of work to a greater extent than larger fleets. In the latter class are: electrical and steering unit, carburetor, battery and radiator repairing and brake drum reconditioning. There are four ties of percentages: brake adjusting, rebuilding of engines, clutches, transmissions and rear ends, electrical and steering unit and brake relining 82.3 per cent. Following these ties in order are carburetor repairs, truck body repairing and painting.

Medium fleets depart from small fleets and from general averages in several classes of maintenance. They do more painting (76.5 per cent) than any other group size of fleet and, for contrast, less electrical and steering unit, passenger car body and battery repairs than any other size fleets.

Fleets containing from 51 to 200 vehicles depend less upon outside shops than any other group. They do 56.4 per cent of maintenance in their own shops, which is not only higher than any other group but therefore higher than the general average of 45.8 per cent. Their percentage is higher than other groups in no less than 13 classes of maintenance, viz.: brake adjusting, rebuilding of units, wheel and axle aligning, brake lining, truck body repairs, frame and axle straightening, passenger car body repairs, replacing glass, cylinder rebor-ing, tire and tube repairing and body rebuilding, crankshaft grinding and speedometer repairs.

● Large Fleets ●

Those who like to believe that very large fleets do all their own maintenance work will find small comfort in the figures for fleets containing more than 200 vehicles. They have the smallest general average percentage of any group and they do less work than other groups in 11 classes of maintenance. These jobs are: brake adjusting, rebuilding units, brake lining, painting, truck body repairs, carburetor, tire, tube and radiator repairs, brake drum reconditioning, spring repairs and crankshaft grinding.

● Accounting the Variables ●

Evidently some factor or factors other than mere number of vehicles sways fleet owners in deciding to do work themselves or send it elsewhere. This fact was discussed by Chairman Orr in the opening paragraphs of his

TONNAGE AND AGE OF TRUCKS

Tonnage Rating	1/2	3/4-1	1 1/2	2	2 1/2-3	3 1/2-5	Over 5	Total
Less than 5 yr. old . . .	2,294	2,054	1,970	1,080	727	483	162	8,770
More than 5 yr. old . .	234	2,480	659	855	405	475	272	5,380
Total	2,528	4,534	2,629	1,935	1,132	958	434	14,150
Percentage of trucks								
more than 5 yr. old	9.3	54.7	25.1	44.2	35.8	49.5	62.6	38.1

More than one-half of the 3/4-1-ton trucks reported are more than 5 years old which is more than five times the percentage of half-tonners of this age. Included in the total are 1018 electric trucks of which 534 are in the 3/4-1-ton class.

report, read to an expectant audience in Washington.

Fleet complexions, densities of service and operating requirements were the first three factors he mentioned and he discusses the matter at more length in conclusions embodied in the report. Other factors bearing upon fleet managers' choice of self-service or outside service, as a general policy or in particular classes of maintenance as given in the report are: type of business served, comparative use rate of vehicles, topography of operating area, replacement policy, general maintenance standards, concentration of vehicles and adequacy and abilities of available outside agencies. Truly here are enough factors, reasons, excuses and ideas to justify almost any policy.

Rate of use of vehicles naturally is considered in deciding upon a general maintenance policy and upon the division of work between fleet and outside shops. Transport service with daily trips of two or three hundred miles calls for a different maintenance set-up than that required for public utility line trucks. If the demands upon a fleet comprise a series of peaks and hollows overhauls may be scheduled to a day. In other cases general overhauls result in loss of truck time.

Operating conditions alter the relative importance of classes of maintenance. Steep hills are hard on brakes and clutches, dump truck operation is easy on no part of a truck, de luxe deliveries may cost more for washing, polishing and painting in one year than other trucks in five or ten years.

The owner's policy on replacement may be the governing factor in the maintenance program. If he trades in vehicles every year, or every two years—"he cannot economically impose the burdens of extensive maintenance facilities on his operation. Fleets on a frequent replacement basis must therefore depend upon outside agencies to a larger extent than fleets replacing vehicles on a longer or mileage basis."

Many large fleets are divided into smaller units ranging in size from a sub-fleet of several hundred vehicles

to a lone truck working "miles from nowhere." Such fleets have distinct service problems because of this geographical distribution. The report states that proper supervision and control over self-maintenance is difficult and expensive in such cases, particularly over the scattered vehicles.

Several maintenance policies are employed by fleet owners operating in both cities and rural territory. Some owners do their own maintenance work on the large groups of vehicles concentrated in a relatively small area and rely upon outside shops to take care of scattered vehicles. Other owners choose one method or the other for all their vehicles, far and near.

Choice, in any event, depends to a large degree upon availability of outside service. This question was discussed from the dealer's standpoint in the article in the December issue. A few observations, from the fleet owner's side, and derived from the concluding paragraphs of the report are in order.

Chairman Orr wisely observes that "No fleet of any size is simple in its makeup. Many makes and models appear therein. Aside from the chassis proper, auxiliary labor and time saving devices are necessary for the most efficient work performance."

The report includes two sets of figures which suffer no lack of value because they do not fall within the tabulation of maintenance by classes. They are stock of parts carried in fleet shops and percentage of vehicles out of service for maintenance.

● Truck on Sick List ●

Thirty-nine fleet owners, operating almost 15,000 vehicles report an average stock of parts of \$20.58 per vehicle. The turnover reported by six fleets is less than 10 per cent and the most rapid turnover reported is 125 per cent a month. A few fleets carry no stock of parts at all.

A host of capable fleet managers look upon percentage of vehicles out of service for repairs as a measure of the efficiency of the maintenance policy and the shop. Par for the out-of-service figure is 3.8 per cent, according to general averages.



Our Own Ear-to-the-Ground Department

Peeps at the New Chevy

The Chevrolet factory has said nothing publicly about its new truck, but from a dealer and also from a look at the job in his store we learned the following: It will have the new six-cylinder engine with downdraft carburetor but with a different type of air cleaner; a clutch larger than the passenger car's; heavier rear axle and much heavier axle shafts. The four-speed transmission will have a lower first speed (for better pulling under very severe conditions) and a higher third speed. Direct ratio will be same as before. And—the dealer said he had heard the truck might be rated at 2 tons.

Ford Changes Mind

Nothing has been said about the Ford, either, at this writing. But Mr. Denham, our accredited Detroit sleuth, learned from parts suppliers that Ford had issued stop orders on releases on four-cylinder parts, and is rushing work on an eight. It is his understanding that the four-cylinder inventory will be used up in commercial cars. We italicize commercial cars because according to Ford nomenclature that does not mean trucks. So, after all, the new Ford truck may be an eight.

Seconding the Third Idea

Several assemblers are preparing to bring out six-wheelers using a tandem axle with third differential, which Timken has just developed.

Kenworth Climbs Aboard

By mail from the West Coast the Kenworth factory has acquainted us with a house-to-house delivery job which it has designed. It uses a Buda four-cylinder, 198.8-cu. in. engine of H-199 type built particularly for house-to-house work. It will be described in our February number.

A 3-Tonner at \$1,350

Studebaker's new 3-ton model at \$1,350 is, according to a check of our December specifications table, the lowest-priced 3-tonner built. That's \$100 lower than the former low.

A Newcomer, and . . .

The new Rockne car, unless we have been misinformed, will also be sold in a light delivery edition.

A Fade-Out

The Rockne will find a vacant spot in the CCI specifications table because the commercial car edition of another passenger-car maker (look up the table yourself) has been withdrawn from circulation.

Bigger and Better Molar

An informant, who begged us to "mention no names," handed us the startling intelligence that a gear manufacturer has designed a tooth that will stand up satisfactorily under 15 to 1 reduction. If true, this may mean displacement of worm and bevel-gear rear axles by single reductions.

Front-Wheel-Drive Truck

The manufacturer of an internationally known four-wheel-drive truck (how can you help guess that one?) while cautioning us to be discreet has given us information by mail which is so hot with news value that we can't help being indiscreet to this extent. This company will

shortly announce a front-wheel-drive truck especially suited for garbage removal. This will be the industry's first front-wheel-drive truck, as you well know.

And a Tear-Drop Cab

This same company is making another progressive step by putting a "tear-drop" type of cab on a forward control job. This will be the first truck incorporating this extremely modern method of lessening wind resistance. (We'll be glad to put the factory in touch with you on either of the above tips if you are interested to that extent.)

THE OVERLOAD

A collection of items—interesting even when not news—and garaged here because there's no other place for such morsels.

Quoth a Sales Manager:

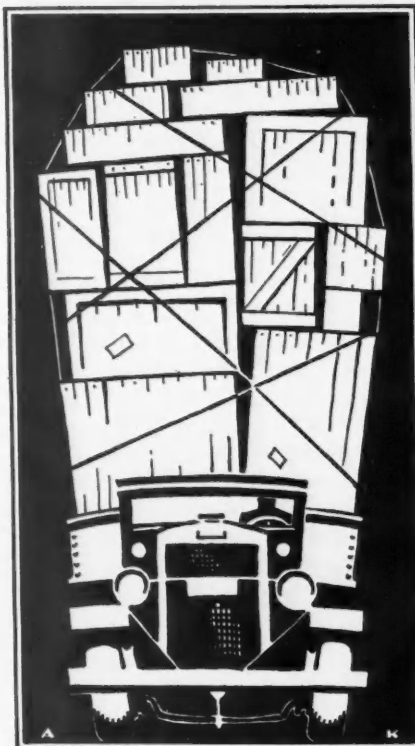
"There's too much wringing of hands and not enough of doorbells."

It Does Seem Strange

The White Co. of Cleveland received an order from the City of New York for a couple of million dollars' worth of equipment. The Autocar Co., of Ardmore, Pa., got another for half a million dollars' worth. All of which prompted Tom Barry, secretarial magician of the N. Y. Merchant Truckmen, to wisecrack in one of his periodical "bullytins": "Migawd! Doesn't the Mack Company know anybody in New York?"

"Cheese and Good Will to Man"

Imagine our amazement, if not chagrin, when we opened a Xmas package and found it to contain a big hunk of cheese. "Is this a cheer or is it a jeer?" we pondered. It certainly didn't look like an ovation. Then we found the explanatory letter. It was a gift from the FWD Sales Co. The cheese, we learned, was a champion, made by P. H. Kasper, who has had his work recognized with medals and loving cups so often that he is recognized as the world's champion cheese maker. Well, he made us happy, thanks to FWD, and the cheese is no more.



And How They'll Enforce It!

In Minnesota 673 men took examinations for the positions of inspectors and supervisors required for the enforcement of the state's ton-mile tax which goes into effect Jan. 1, 1932. A newspaper dispatch from Madison tells us that many of the men taking the examinations were unemployed railroad men. Oh-oh!

Railroad Stupidity

And from Quebec we learn that representatives of various departments of railway company employees have agreed not to purchase any foods or farm products which are transported and delivered by motor trucks. If the boys live up to the boycott, it means they'll surely starve.

And Yet Some More Stupidity

That's a bagatelle compared with the following occurrence in another portion of the British Empire. The Minister of Railways of South Africa has warned trading firms to stop purchasing any more "motor vans or wagons" intended solely for use in their own businesses, and definitely announced that during the January session of Parliament he will introduce new legislation making compulsory the sending of all produce or goods by railway-owned vehicles. Such legislation, together with existing restrictions, would give railroads an absolute monopoly of every sort of road traffic.

Biographical Note

George M. Graham, now vice-president in charge of sales of the Rockne subsidiary of the Studebaker company but formerly general sales manager of Pierce-Arrow, gained a reputation for marksmanship while with the latter company which lives unchallenged to this day. In a corner some distance removed from the door to his office stood a clothes tree. Entering his office every morning Mr. Graham would pause just inside the doorway and shoot his hat at the tree. So perfected was his accuracy that an associate of Mr. Graham's who is our source of information, says that in all the days of their association he never once saw Mr. Graham miss his mark.

The Bare Facts of the Case

The Philadelphia Chapter of the Pennsylvania Motor Truck Association drew a full house to its annual meeting. The chapter hired the Bijou Theatre and the burlesque show that goes with it. A dozen strip numbers livened up the proceedings which followed the election of officers on the stage. And, believe it or not, when Secretary J. Wallace Fager was authorized to cast a unanimous ballot electing the officers, the ballot he cast was a blank piece of paper. Is there really nothing in a name?

This Should Be a Trend

The "Wood Hoister," a six-year-old house organ of the Wood Hydraulic Hoist & Body Co., Detroit, is being produced on the Wood advertising pages in COMMERCIAL CAR JOURNAL, beginning with this issue. (Leaf over to pages 58 and 59 for the evidence.)

Mr. Higgins Replies

"Regarding the remarks made in this column in December I wish to say that the 88.2 per cent efficiency of our FWD as tested by Purdue University refers to the mechanical efficiency of the driving mechanism from the clutch back. Tests about 10 years ago made on Mack chain-drive and a number of army-type rear drive trucks showed an efficiency of about 85 per cent. In a paper presented to the S.A.E. by Austin Wolff last year he gave the efficiency of rear drives as 85 per cent and of four-wheel-drives as 80 per cent. The Purdue test rather upsets the apple-cart of tradition as to the efficiency of four-wheel-drives."

25,000 Truckmen Can't Be Wrong

We understand the Pennsylvania Public Service Commission estimates there are 25,000 truck operators operating illegally in the Keystone State.—G.T.H.

TRUCKERS must UNLOAD FAULTS OR PERISH

EVERYONE who can read, write and talk, intelligently or otherwise, has his own opinion of the nature and causes of the present business depression. Everyone is entitled to his private opinion of this and other matters.

But regardless of our opinion of the seriousness of the situation and any possible differences of the underlying causes and specific manifestations, we must realize that it has brought about a revolution in industry and a corresponding revolution in the transportation of goods. Long before the storm of this depression broke, there where clouds upon the horizon which betokened the changes that were taking place in the business atmosphere.

In the first phase of motor truck transportation between 1904 and 1912 the motor truck was used experimentally in industry upon a small scale as a private transportation utility. This was the period of experimentation.

The second period from 1912 to 1920 has been already referred to as the period of establishment as a permanent part of the transportation system. It was a period of adaptation and the development of technique.

The third period from 1920 to 1929 was the period of fierce rate and service competition in which operators stood or fell depending upon their skill and shrewdness in competition.

The fourth and critical period has begun. It may be said to have opened with the business recession which started in the summer of 1929 and with the stock market crash of 1929 and the depression and secondary crashes of 1930 and 1931. The industrial machinery is being overhauled and the trucking industry must put its parts in place through the development of sounder business practices. In setting the machine in order, the

Common Carrier Haulers Are Now in the Critical Period of Their Development, and the Future Offers Them No Success Unless They Adopt the Business Practices of Truck Operators Who Have Learned What's What Through Bitter Experience

By G. LLOYD WILSON

Professor of Commerce and Transportation
University of Pennsylvania

trucking industry will doubtless be assisted by public service or public utility commissions in various states.

The trucking companies which will survive this crucial period of business adjustment and develop profitable and useful operations for the future will be those which adopt the best practices, which have been developed by leaders in the industry as a result of experiment and effort, much of which has been painful and costly.

These practices include:

1. Adequate and reliable accounts and statistical control.
2. Proper freight classification.
3. Properly constructed rates based upon correct rate factors.
4. Intelligible and properly prepared tariffs.
5. Definite liability bases and adequate freight shipping documents.
6. Adequate insurance coverage.
7. Intelligently aggressive traffic solicitation and public relations programs.
8. Definite and adequate pack-

ing and marking requirements.

9. The coordination of warehousing and motor trucking.
10. The coordination of motor transportation with other transportation agencies.
11. The clarification of common carrier, contract carrier and private motor trucking status.
12. The adequate and constructive regulation of the motor transportation industry.

To better understand the many things learned through these various periods of trucking development some amplification is necessary. The first period was principally experimental from a mechanical standpoint and for that reason is not as sig-



The Answers to a Common Carrier's Prayer

All who are in the motor trucking business realize that sudden and significant changes are taking place overnight. What is it all about?

Why these sudden gusts of traffic and then again periods when there is not enough freight to keep the dust off the truck floors? Are we common carriers, or private carriers or aren't we? Why is it that the receipts and expenditures get all haywire and a ton of freight hauled does not yield the profit it should? Do the regulations of the state commissions pertaining to classification, rates and tariff publication apply, or don't they? What is the liability of the truckman for the freight he hauls, and why, and what are we to do about it? What insurance should we carry, and must we carry this protection or may we get along without it? How can more and better traffic be developed and retained in face of stern competition? Should goods shipped by motor truck be packed or shouldn't they, and if so how? How does the motor trucking business mesh in with warehousing in the modern scheme of things? What is all this noise about regulation? Should we favor it, or oppose it, or climb down into the cyclone cellar until all the blow is over?

These and many other questions are buzzing around the heads of motor transportation people like mosquitoes in a New Jersey cottage. What are the answers?

The answers will be presented in a series of articles by Mr. Wilson, who, at the suggestion of Commercial Car Journal, investigated the experiences of truck men in various parts of the United States. All phases of the trucking business, with their problems and answers, will be covered in the series.

The series is intended not only for operators, but manufacturers, the trade and shippers as well. All must study the changing picture of motor trucking and know the problems which operators will have to meet if they are to exact fully the benefits of this arm of our distributing system and get greater acceptance of the truck in the future.

nificant as the later periods of operating development. The second period, accelerated by the World War, taught us several things about trucks that were suspected before but not wholly appreciated.

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TRUCKERS MUST UNLOAD FAULTS OR PERISH

We learned that trucks could be used successfully and with great flexibility in hauling goods at odd hours of the day, rapidly and under unfavorable conditions over long and irregular routes. The figures for truck production and registration demonstrate conclusively how well the truck fitted into the changing industrial structure between 1913 when the war clouds gathered over Europe until 1920 when the world sought to go about its business with the hope that the atmosphere had been cleared by the treaty of Versailles. Truck production ranged from 22,000 in 1912 to 92,130 in 1916 and from 128,157 in 1917 to 321,789 in 1920. During this eight-year period, registrations stretched from 41,400 in 1912 to 1,006,082.

● Post War Demands ●

In less than 10 years the truck demonstrated its peculiar fitness to perform numerous and variegated services in the crucible of actual field conditions.

The business depression of 1920-1921 tended to give the truck industry a breathing spell to look around and consolidate its position in the transportation field. The railroads and steamship lines and express carriers also were given an opportunity to readjust their services and practices to meet the new demands of industry. A subtle change came over American industry. Prior to the world war goods were shipped in ship cargo lots, from the manufacturing plants to wholesale distributors. Raw materials were purchased well in advance of needs and moved in large units to the manufacturing centers awaiting the needs of industry. The system of production, manufacturing and distribution was characterized by large unit movements at relatively low rates of speed. The war quickened the pulse of industry and the production and distribution system changed from a bulk slow-moving system to a quick-moving smaller unit system. This change did not take place overnight but the process was so rapid that it was upon us before we knew it.

The truck fitted well into this new post-war distribution system. Low inventories of goods, quick turnover, the smaller stocks of raw materials, rapid manufacturing, frequent style changes and the tendency to trade in branded rather than unbranded goods, were all factors which placed carriers which could give rapid, frequent,

small unit service at short notice in a position of advantage. The question of price tended, however, to be a much more important factor in transportation after 1922 than in the halcyon decade prior to that year. Railroad rates were reduced generally by 10 per cent in 1922 and other individual rates were reduced to an even greater extent. Railroad freight train schedules were tightened up. The average speed of freight trains increased, through package car services were offered by the railroads between principal cities, and freight forwarding companies offered expedited freight service to less than carload shippers either through the consolidated freight car services or container car services. Steamship lines offered more regular and faster service and the express companies sought to attract the types of traffic requiring express train service. In a word, competition became keener and the shippers were offered a variety of freight services all of which offered more or less dependable and rapid freight movement. Since the feature of speed was assured the question of price became important.

Truck operators were confronted with the competition of other common carrier truck operators, contract trucking carriers, private industrial trucks and the competitive services offered by railroads, express companies, steamship lines and other carriers. Rate cutting was unwisely resorted to by many carriers with the result that the rates in many cases fell below the true costs of operation. The result was inevitably a rapid turnover in trucking operators in many sections of the country. State public service commissions attempted to prevent ruinous competition by requiring common carrier motor freight lines to obtain certificates of public convenience and necessity before engaging in operation. Many states required the common carrier lines to publish tariffs of freight rates and charges and adhere to their published rates. Indemnity bonds were required in many states to assure the payment of valid claims against the carriers. The principal difficulty was the task of distinguishing between common carrier and contract truck operators and the regulation of the latter.

Despite increasing competition, disastrous rate wars, rapid turnover among operators, increasing service demands and higher standards of transportation requirements, the truck industry continued to expand and develop, making new friends among shippers, reaching out for a greater variety of traffic, serving more communities, and stretching the length of its hauling radius year by year. Let's examine

the figures for motor truck production and registration during this period of prosperity. Production increased from 321,789 units per year in 1920 to 826,817 in 1929 and registrations from 1,006,082 to 3,379,854 units during the same period.

The period of 1929 to 1932 has been, is and will doubtless be a period of transition in which the lamed, high-g geared American industrial system will repair the damaged parts torn asunder by the market crash of 1929 and discard obsolete and outworn parts to get the machine in working order for the next forward move in business. How will the trucking industry adapt itself, as an integral part in the rebuilt machine?

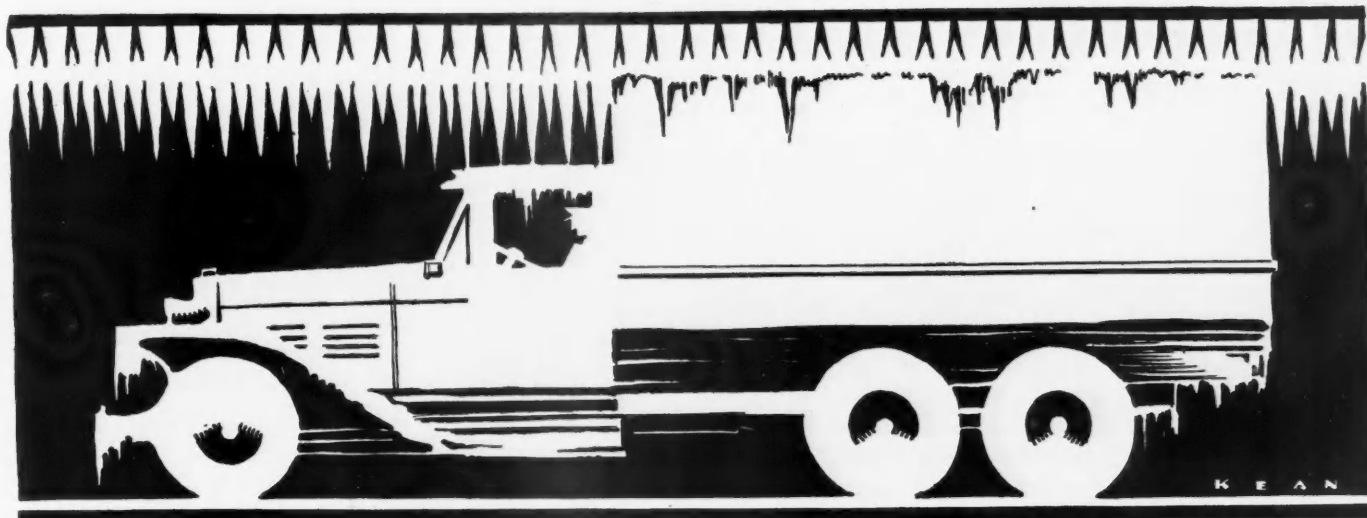
● Present Trucking Demands ●

In 1930 there were 3,480,937 trucks registered in the United States, an increase of 3 per cent over the registration in 1929. Less than 600,000 trucks were produced in that year and the registration in 1931 is approximately 3,500,000.

Only a small percentage of these trucks are operated in strictly common service. The most reliable survey of the operation of trucks conducted by the Bureau of Public Roads of the United States Department of Agriculture in Arizona, California, Colorado, Idaho, Nebraska, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming, indicates that approximately 5.5 per cent of all trucks are used in common carrier service, 8.7 per cent in contract carrier services, and 85.8 per cent in private service. The number of common carrier trucking companies is increasing in all parts of the United States, and the status of these carriers in connection with regulation by the states is being clarified with the passage of each succeeding year. Greater stability is being brought about in the trucking industry from within and from without.

Common carrier trucking companies have learned as a result of their costly experience in the world war and post-war periods that overly intense competition among themselves and with other carriers does not help pay dividends. Numerous small independent operators are giving way to larger and more stable organizations. Rate wars have been found to be ruinous not only to the smaller, weaker lines but to the larger and stronger operators. Order is being brought out of the chaos which has unfortunately characterized many motor freight operations.

Next month's article will deal with another phase of the common carrier subject.



DAIRY MEN IDOLIZE TRUCK REFRIGERATION

REFRIGERATED truck transportation has dropped its swaddling clothes and is strutting down vocational avenues with the proud assurance of a youngster just beginning to feel his power, judging from the way it displayed itself at the recent Sixth Dairy Industries Exposition in Atlantic City.

An observing fleet operator or dealer looking over the more than 50 booths of frigid exhibits could readily have seen that things were happening, but if, at the same time, he kept his ears cocked for observations dropped here and there by men direct from the field, he would have been convinced that things were happening. Here are a few of the most portentous overheard from lips of authority, just as they were handed out:

"The small meat packers started something when they put on refrigerated bodies—large packers are now following through with a vengeance. The competition of low-temperature delivery was too much for them."

"Have you heard the latest? They're selling the housewife ready-made bis-

Great Advances Made in Body Design, Insulation, Refrigeration Systems and Temperature Control Captivate Interest at Annual Exhibit

By MARTIN J. KOITZSCH

cuit and pie dough now. It's a new idea in the food line, it's getting popular and requires a refrigerated truck to merchandise. The stuff is cut out, packed in cartons and ready for the pan upon purchase. Temperatures must be held between 55 and 60 deg. A company in Louisville, Ky., just placed an order for 50 trucks."

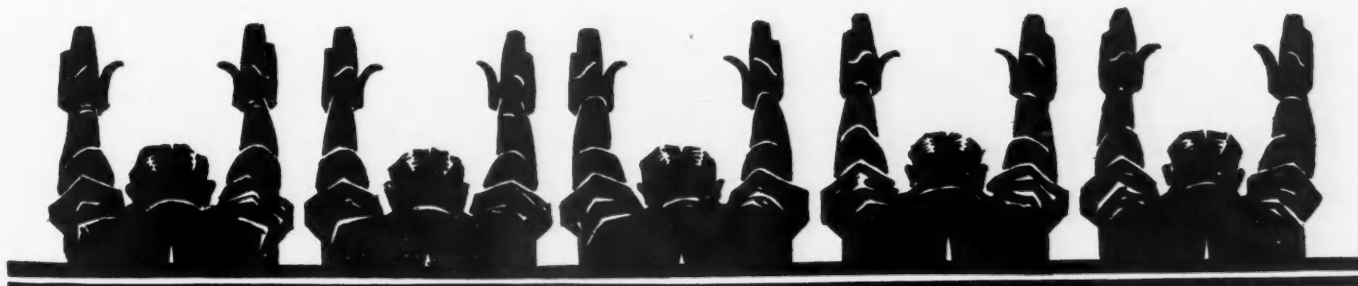
"Long-distance transportation of all manner of perishables is growing by leaps and bounds. I just sold several large transport companies refrigeration equipment for hauling fruit and produce on 300-mile runs."

"Looks as if we're going to get some business from the South. I heard that several Southern states are considering legislation that will make retail milk delivery at temperatures below 50 deg. compulsory. That not only means house-to-house delivery trucks, but *refrigerated* house-to-house delivery trucks."

"We're just at the beginning of refrigerated truck transportation. What is happening in the ice cream business will happen in a lot of other industries. We have broken the ice in the egg, fish, candy, baking, frozen foods and other vocations, and the saturation point is still out of sight."

Intermingled with these gems of development and prediction were a host of opinions based on actual operating experience regarding cost, efficiency, merits of one piece of equipment against another, appearance, etc. A stroll through the aisles of the show was, indeed, a post-graduate course in cold transportation. The dairy industry has not only accepted refrigerated truck and automotive

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THE STORE-DOOR PLAN

Actual Operation of Gigantic Southwestern Rail-Truck Delivery Project, Involving 3000 Draymen and 90 Railroads, Reveals Need for Some Revisions in the Rate Structure

A Special Investigation

By R. E. PLIMPTON

BY far the most elaborate plan made available to the world of shippers is the store-door service introduced Oct. 1 by the Southwestern Lines, and described on page 21 of the October issue of *COMMERCIAL CAR JOURNAL*. Other newcomers are the Santa Fe and the Union Pacific, with tariffs covering intrastate movements only. The Santa Fe has issued a pick-up and delivery tariff, which was to become effective Dec. 7, 1931, and lists 36 of its larger stations in California. Kansas and Nebraska intrastate shippers are offered a co-ordinated truck and railroad service by Union Pacific tariffs that went into action in September and July, 1931, respectively.

In the first issue of the Southwestern Lines tariff, the number of stations offering store-door service were as follows:

Arkansas	404
Colorado	39
Kansas	605
Louisiana	191
Missouri	435
New Mexico	56
Oklahoma	468
Texas	857
Total	3,061

There have been some additions and cancellations announced in supplements to the tariff, but the above figures remain

representative of the stations served in the various states. Many smaller stations in the territory are not listed, either because the service is not required, or proper facilities for giving it are lacking. One of the trunk lines alone has 125 stations in Missouri and Arkansas, shipments to which are entitled to free pick-up service in St. Louis. The free delivery is offered at only 35 of these points.

Smaller stations may have only one authorized drayman under contract with the railroads. At places such as St. Louis and Kansas City there are twenty-five or more of the contract draymen. Except for the Cotton Belt,



AFTER 60-DAY TRIAL

DEVELOPMENTS AFTER TWO MONTHS

Need for liberal interpretation of rules and regulations by both rails and truckmen.

Plan so far has brought no change in the amount of freight carried by rails.

Approximately 75 per cent of freight carried by system originates with established draymen.

Draymen prefer shunting business coming through railroad agencies to closest drayman.

Draymen consider flat rate system of compensation unsound and want minimum rates for shipments.

Rebate plan for shippers moving own freight objectional to draymen because it cuts into profitable hauls.

Consignee petition for allowance for picking up own freight contested because of possible platform congestion.

Future will see fewer draymen in larger cities.

Studies will be conducted for faster service, new package-car routes, later station closing hours, fast limited-stop service and more work for draymen by eliminating trap-car movements.

which at certain points is using its own trucks for the store-door movements, the 90-odd railroads participating in the tariff are taking advantage of the facilities provided by local cartage concerns. Thus more than three thousand draymen have been enlisted in the service of the Southwestern Lines.

The duties expected of them are set forth in an announcement made by the

Missouri Pacific, to educate its local representatives:

"Contracts have been made with local drayage companies at agency stations as shown in the tariff, whereby such drayage companies will act as the Agent of the Railroad in calling for less carload shipments of merchandise intended for outbound movement, draying such shipments to freight stations for forwarding; also, for delivering inbound shipments arriving at freight stations, to consignees' premises. Bills of lading for outbound shipments will be signed upon request by the local drayage companies at the time such shipments are received at the warehouse of the shipper, and freight charges on inbound shipments will be collected by the drayman upon delivery of inbound shipments to warehouse of shipper, except in such instances where consignees are on our regular credit list, in which event freight charges may be collected through the regular channels, if so desired."

The railroads have drawn up a uniform agreement, which the three thousand and more draymen have signed, with only minor deviations. The drayman agrees, individually, with each participating railroad in his city, to provide "adequate forces and equipment for the prompt movement of such freight" as the railroads may request

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AFTER HOURS

Profits, Too, Have Been Dishonored

It used to be that a prophet was without honor only in his own country. During the past several years, however, the business prophet has been responsible for a popular revision of the old proverb so that today the whole world treats a prophet to a right hearty razzberry the moment he exposes his temerity. We've collected quantities of the vulgar fruit on several occasions and quite lost our appetite for more. The present moment—that is, the beginning of a new year—offers excellent possibilities for a Bronx serenade but we're going to sidestep it on a technicality. We've a few things to say about 1932, but they are observations, not predictions. Our views concern themselves with production, trade opportunity and legislation.

A Hope Worth Its Weight in Per Cent

In 1931 the industry produced a total of 425,000 trucks. If you should want to see the record of a worse year you'd have to leaf all the way back to 1923. There was nothing that manufacturers could have done about this. The general slump in all business during 1930 and 1931 resulted in an understandable reduction in truck use. Business curtailment, of course, made it utterly impossible for some users to swing purchases, whereas it prompted others, more able financially, to engage in extremely

conservative buying practices. Any marked improvement in this condition must naturally await a marked improvement in business at large. But we'll be keenly disappointed if a slight improvement, say of about 18 per cent, isn't recorded in 1932. This would bring production up to around 500,000. We base this expectation not only upon a slight improvement in general business but upon the irresistibility of the remarkable products which manufacturers will place in the hands of the truck trade.

The Loud Knock of Trade Opportunity

The buyer's opportunity in the year ahead is the trade's opportunity. For a thorough appreciation of this opportunity we refer the industry to the truck descriptions in this issue and to the Ford, Chevrolet, International Harvester, Dodge and other announcements which we expect for publication in February. And if you actually want to see the opportunity present in the new products all you have to do is to visit the nearest automobile show which has a truck exhibit. Trucks, in our estimation, never were better and never more magnetically priced.

Such products ought to set the trade to ringing in the New Year with doorbells instead of wringing it in with their hands. We'd like to believe that in answer to the ringing there will be a rush of buying, but there's no such luck that 1932 will be an order-taking era. Buying will continue on a sound basis; and selling will be difficult and will have to be sound.

To salesmen the opportunity for immediate sales may not—and as a matter of fact it seldom does—reach expectations. But another opportunity, and one which should not be overlooked, is that of sowing seed with users who won't be in the market until business does

pick up. It is an extremely important opportunity because the future harvest will make the 1932 sales crop look like a famine.

So far as dealers are concerned the opportunity ought not to be perverted into a mere swapping of dollars with shrewd buyers. This would merely cause the wolf to take the salesroom welcome mat seriously. Dealers are as well aware of the evil effects of over-allowance, long terms and improper transportation recommendations as we are. So we don't propose to preach them a sermon because if their knowledge doesn't make itself evident in their business, we could preach from now until the Boston Red Sox won a pennant and never make an impression.

Congress is After Votes, Not Trucks

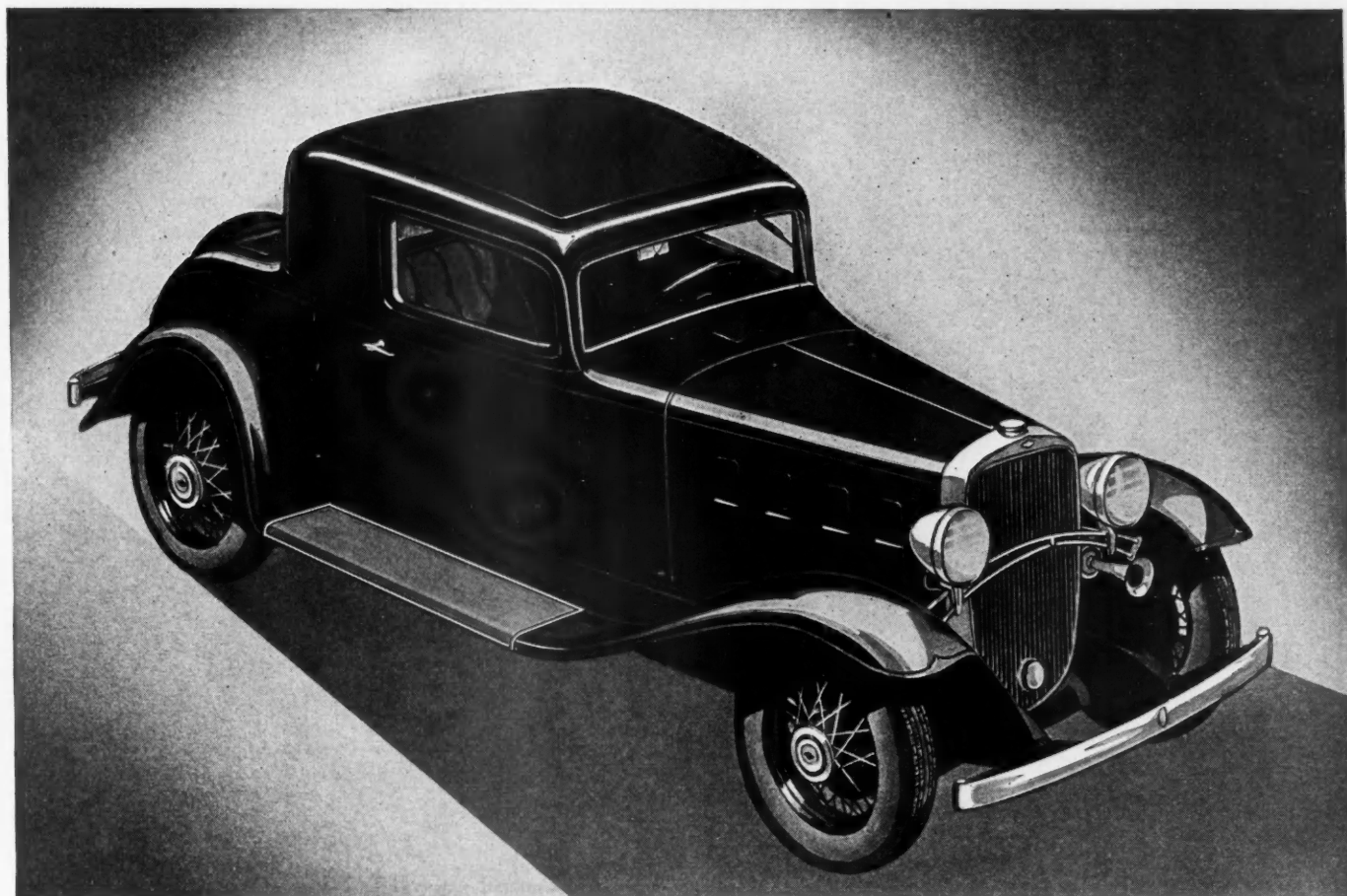
There is nothing on the legislative horizon that resembles a business obstacle. Enactment of truck legislation by Congress during 1932 does not seem to be even a remote possibility. Some reputable truck operators have set up a howl for interstate regulation but to the current Congress their cry is inaudible. Congress has before it too many more important matters whose howls for settlement are deafening. This is a presidential year and anything that has so little vote-getting possibilities as truck legislation not only will not get to first base but won't even get a chance at bat.

The year, therefore, will be a good one for the truck industry to prepare itself for events which seem destined for 1933. A number of Congressmen already have declared their intention of introducing regulatory measures. The industry must be organized to forestall unfavorable legislation and prepared to fight for definite objectives if legislative harnessing becomes inevitable.—G. T. H.

PRESENTING

The New Chevrolet Six

THE GREAT AMERICAN VALUE FOR 1932



THE STANDARD COUPE

An even finer car for business use



Now—Chevrolet is destined to play an even bigger part in American business and industry than in the past. *A new and finer six-cylinder Chevrolet model is on the market*—a car that combines many new advantages of special value to the modern business organization. This new Chevrolet is a faster car on long-distance trips—a livelier, nimbler car in city traffic. Because Chevrolet has added many new features to the engine, which increase its power, speed and getaway. The new Chevrolet Six is a much easier car to handle, a much more restful car to drive throughout the day. For Chevrolet has

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN, DIVISION OF GENERAL MOTORS

The Commercial Car Journal

pioneered an exceptional new *double-feature*—the famous silent, non-clash, Syncro-Mesh gear-shift and simplified Free Wheeling. This combination assures quick, quiet gear-shifting and positive control of the car, under all driving conditions. The new Chevrolet Six offers the pride and prestige of an even smarter, more attractive appearance. Because Chevrolet and Fisher have styled this car in the finest custom-car manner. Best of all, the new Chevrolet Six maintains the sound *dependability* and *matchless economy* which made last year's car so well suited for business service. And the prices have been set among the lowest in the market.

SILENT SYNCRO-MESH SHIFT
SIMPLIFIED FREE WHEELING
IMPROVED
SIX-CYLINDER ENGINE
60 HORSEPOWER
65 TO 70 MILES AN HOUR
FASTER, QUIETER GETAWAY
SMOOTHER OPERATION
SMARTER FISHER BODIES
GREATER COMFORT
UNEQUALLED ECONOMY

PRICED
AS LOW AS **\$475**

F. O. B. Flint, Michigan. Special equipment extra. Low delivered prices and easy G.M.A.C. terms.

January, 1932



SHOP HINTS PICKED

Fig. 1. Ford A Generator

Because the power house type generator is no longer in production on Ford A engines many shops do not care to invest in commutator turning fixtures. The job can be done in a lathe by making a few minor changes in a stock shaft for this type generator. The generator shaft clamp screw, part number 20531, is drilled in the head to fit a lathe center. The generator armature is mounted on the shaft and set up in the lathe as shown in the photo. Alton Vaughn, service manager, Bellevue Garage (Ford), Hammonton, N. J.

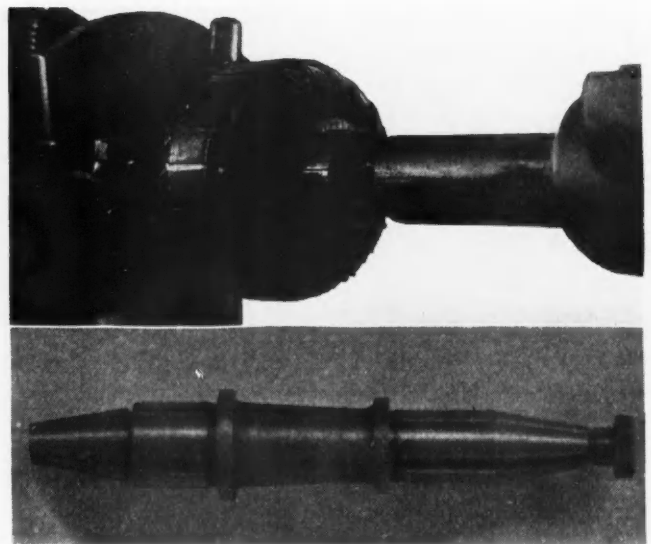
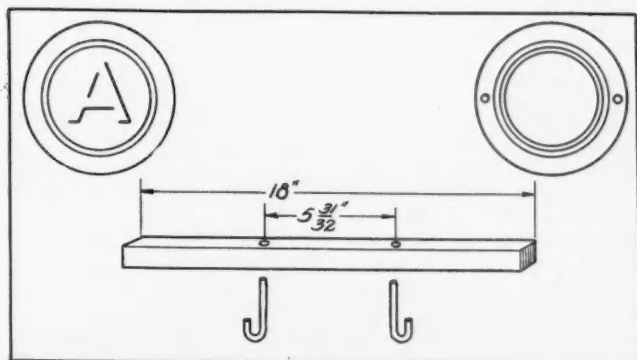
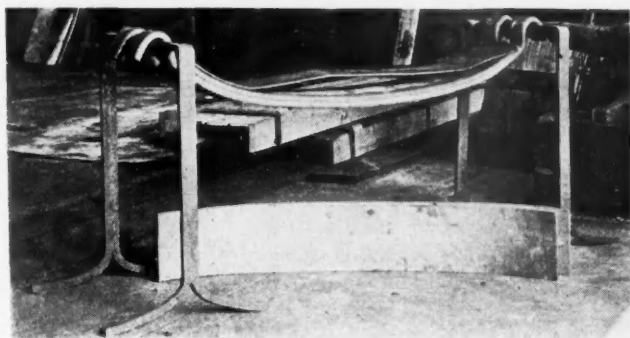


Fig. 2. Autocar Hub Wrench

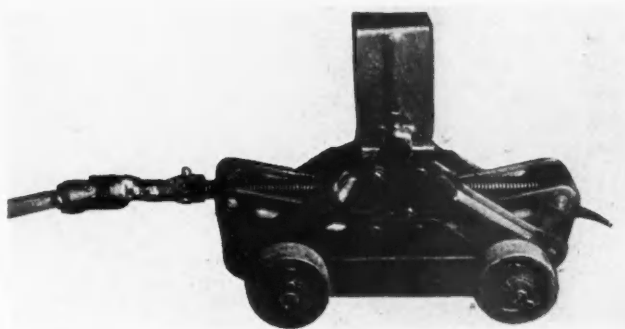
Seeing wheel nuts interfered with a friction strap wrench for removing hub caps on an Autocar truck, W. C. Burgan, San Diego, California, made a special



2



3



4

wrench for the purpose. Two hooks engage holes in the back rim of the hub cap and they are rotated by a square bar handle.

The bar is 18 in. long and has two $\frac{3}{8}$ in. holes at the middle spaced $5 \frac{31}{32}$ in. center to center. Hooks are made of $\frac{3}{8}$ in. rod, $4 \frac{1}{2}$ in. of stock for each hook, bent 180 deg. at the ends to provide $\frac{5}{16}$ in. in the clear.

Hooks are placed in the handle holes and swivelled into place after passing over edge of hub cap.

Fig. 3. Bumper Jig

Straightening front bumpers is always difficult because it is desirable to restore them to original shape. But the question is, what was the original shape? The shop of the Rubel Coal Co., Brooklyn, N. Y., made a template for this job, using a new bumper as a guide. Material is $\frac{3}{4}$ in. boiler plate reinforced by two steel straps, 1 in. thick and 3 in. wide which are formed into hooks on each end to fit over two end floor stands.

- Bent bumper plates are heated to red heat, placed in the fixture and hammered to correct shape on the fixture.

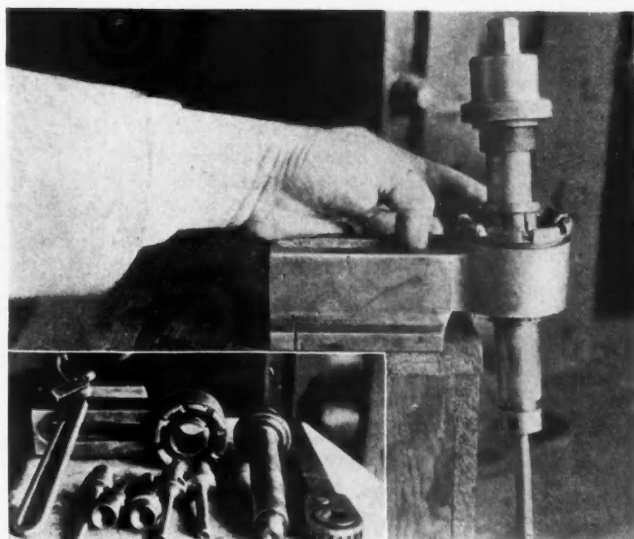
Fig. 4. Shop Jack

Shops jacks which have rotating handles for operation can be made easier to handle about the shop by putting a small universal joint in the handle. Attach a short socket to the adjustment rod by a hole drilled through the rod and weld a small universal joint to the socket and the handle.

Fig. 5. Valve Seat Tool

This tool for cutting out valve seats for inserts or truing valve seats may be adapted to any engine by only one adjustment. The tool can be adjusted for either vertical or slanting positions and it is pro-

FROM 8 LIVE SHOPS



5

vided with screw feed.

Several sizes of fly-cutter holders were made for the tool and they are screwed on the end of the center pin, which measures 8 in. by $\frac{3}{8}$ in. with thread at bottom and a square top. The pin is inserted through a section of steel tubing 7 in. long, of which 6 in. is milled on the outside and the upper inch threaded for a feed gland. The inner surface of the tubing is counterbored to provide a bearing at each end.

The tubing is, in turn, inserted through a hollow ball socket, with four slits extending up from the bottom to allow tension. The ball is inserted in one end of a steel clamp block machined to fit the ball and threaded at the top to receive an adjustment gland, which is screwed down on the ball to hold the tool at the desired angle. The clamp block is attached to a cylinder head bolt and a ratchet wrench is used on the square head of the tool. Submitted by Jos. C. Coyle, Englewood, Colorado.

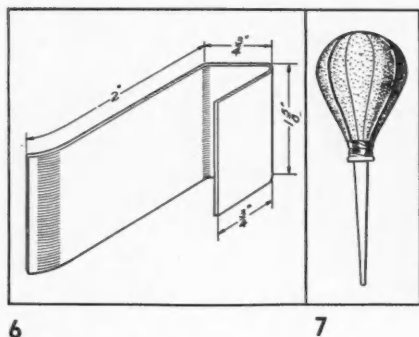


Fig. 6. Valve Removal

The cup shown is used for removing valve spring locks on Continental 16C and Dodge Standard 6 engines. It is made of 16 or 18 gage sheet bent over a $\frac{3}{4}$ in. bar.

When replacing valve lock in Continental the pin can be pushed through the valve stem until it touches the cup on the opposite side, which is the correct position. W. C. Burgan, San Diego, Cal., who submits the idea, says that this cup is especially good for the valve behind the exhaust pipe.

Fig. 7. Rubber Oil Can

An oil can which fills itself like a fountain pen and is capable of shooting oil anywhere about a truck chassis into places where an ordinary oil can cannot reach is used by H. W. Swope, Danville, Pa.

The can is made of a rubber bulb, like those on battery testers, and the metal spout of an oil can, joined by taping or a clamp. Simple enough. A shop man after bursting forth in praise of this idea recalled that dentists have the same sort of device for shooting water into inaccessible places. They call these devices water syringes.

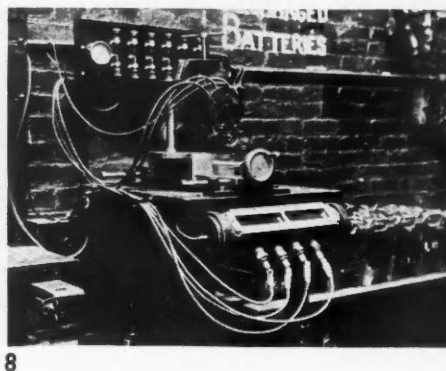
Motor Haulage Co.

Motor Haulage Co., Brooklyn, N. Y., is well known in fleet circles because it did some of the trail blazing which led to acceptance of aluminum as a body material. In 1926, which is a long time ago in this case, the company acquired an aluminum alloy semi-trailer body which attracted attention in this country and abroad.

Unusual among the shop-made devices used in the repair shop is one which does not save time or money on any repair job but is devoted to a routine preventive maintenance operation, to wit, lubricating truck drive chains. It cost little but saves much.

Fig. 8. Ignition Test

A combination spark plug and magneto unit tests spark plugs under air pressure and magnetos firing these same plugs. The plug testing cylinder



der is tapped to take either $\frac{7}{8}$ -18 or metric thread plugs and has a glass window of $\frac{1}{4}$ in. plate glass attached to the cylinder by a metal frame and rubber packing.

Plugs to be tested are screwed into the cylinder and blank holes are closed by spare plugs. The cylinder is filled with compressed air from the shop line giving about 90 lb. pressure. Plugs are checked to fire evenly at all magneto speeds within the capacity of the machine.

This speed range, from 150 to 1850 r.p.m. is varied by friction drive from a constant speed $\frac{1}{4}$ hp. electric motor running at 1750 r.p.m. Any type of magneto in the fleet can be mounted in the test fixture, a vertical shaft and radial arm with a hand screw holding the magneto in place. Air-gaps set at $\frac{1}{4}$ in. are placed behind the machine for an additional test of the magneto when a test of plugs is not needed at the time.

Fig. 9. Carburetor Test Bench

Carburetors are tested for two hours under gasoline pressure of about 4 lb. per sq. in. for leaks in float valves. The carburetors are attached to a flat steel plate 8 in. wide and $\frac{5}{16}$ in. thick with holes drilled to accommodate all the various carburetor flanges found in the fleet. Twin Autopulse units supply the gasoline pressure.

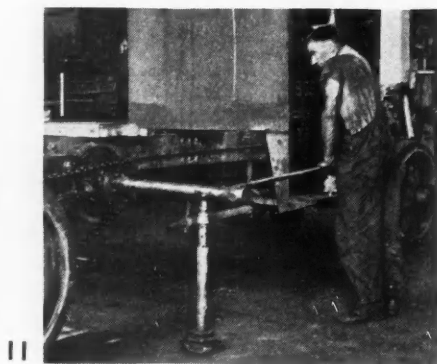
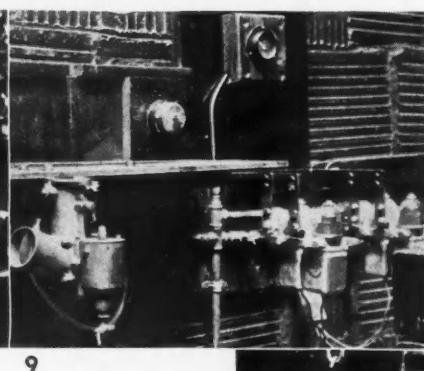


Fig. 10. Drive Chain Tank

Carrying out factory recommendations for lubricating truck drive chains by soaking them in hot tallow



is a job which no mechanic contemplates with joy. The tank here shown has removed most of the "cuss" from the job in this shop.

Throughout the soaking in tallow process the chain is carried on a flat steel plate with a cross-shaped handle. The whole operation of dipping, raising and dripping is carried on without touching the chain.

Tallow is placed in a tank of galvanized iron, 12 in. high and 24 in. in diameter. The chain support plate is made of $\frac{1}{8}$ in. boiler plate and the handle is made of $\frac{3}{4}$ in. stock, welded to the plate, with a hook formed in the top. The cross bar is used to whirl the chain about in the melted tallow. The tank is placed upon a chain sprocket and drum assembly and is heated by an ordinary gas plate.

The chain is thoroughly cleaned before being placed in the tank and after being dipped is suspended over the tank by means of the hooked rod to allow all excess tallow to drip back into the tank. After the tallow has cooled and solidified the chain is removed.

Fig. 11. Giant Wrenches

Mechanics struggling to loosen axle-shaft nuts holding truck wheels in place resort to desperate measures at times. The Society for the Prevention of Cruelty to Sockets misses a sure case for conviction. Frequently all is forgotten until the next job comes along. We are glad to report that in at least two shops honest-to-goodness persuaders have been made which unscrew axleshaft nuts—rust, dirt and contrariness notwithstanding.

Rubel Coal Co., New York, fashioned a wrench for jackshaft nuts on Mack trucks which has not failed in more than three years. It consists of



Domestic New Truck Registrations by Makes and Months

	Autocar	Brookway-Ind	Chevrolet	Diamond T	Dodge	Fagol	Fargo	Federal	Ford	G. M. C.	International	LaFrance-Rep.	Mask	Moreland	Paige	Pierce-Arrow	Relay	Reo	Rugby	Schacht	Sterling	Stewart	Studebaker	White	Willys-Overland	Total Sales Including Miscellaneous
January.....1931	223	154	7,569	167	1,183	23	31	111	11,313	447	1,325	28	225	16	27	3	13	273	32	15	62	84	297	221	159	24,415
January.....1930	160	249	8,754	242	1,608	41	186	169	13,233	727	1,835	43	345	51	14	4	28	698	90	21	145	97	104	413	440	30,241
February.....1931	177	107	7,459	135	1,129	31	36	100	10,868	388	1,368	34	184	12	20	4	28	261	30	11	47	85	268	204	184	23,466
February.....1930	135	235	10,332	207	1,269	43	152	162	14,008	552	1,928	44	298	29	43	1	30	565	67	20	74	155	91	320	431	31,882
March.....1931	121	151	9,396	144	1,363	15	28	123	14,731	454	1,881	36	287	17	29	9	18	308	30	10	57	119	362	207	283	30,609
March.....1930	195	384	13,011	264	1,595	48	157	228	19,551	936	2,364	55	452	56	52	3	45	682	62	27	106	265	102	407	559	42,182
April.....1931	155	215	11,195	236	1,575	33	17	150	17,755	590	2,295	58	344	19	20	18	42	354	31	21	104	166	381	228	346	36,848
April.....1930	216	492	14,055	300	1,684	52	153	252	21,757	1,242	2,740	71	566	57	64	4	61	903	47	47	147	314	98	480	564	47,032
May.....1931	155	190	9,932	260	1,492	24	13	170	15,675	543	2,382	40	355	19	18	17	38	306	20	16	101	175	426	254	421	33,496
May.....1930	212	544	12,825	373	1,504	59	152	213	19,758	1,191	2,531	49	717	36	55	2	93	737	59	55	147	305	115	452	456	43,245
June.....1931	179	144	8,970	240	1,585	36	15	144	12,448	513	2,078	45	294	11	24	18	29	466	20	25	59	136	288	267	351	28,496
June.....1930	183	481	9,761	261	1,113	56	118	158	15,669	889	1,917	56	446	29	19	2	43	581	54	38	109	207	102	412	352	33,512
July.....1931	136	143	9,539	304	1,251	32	12	151	12,932	728	2,282	58	288	22	9	12	34	648	18	4	71	129	301	233	355	30,101
July.....1930	194	388	10,947	338	1,080	47	124	209	19,841	882	2,477	50	577	39	35	2	41	583	71	43	100	266	88	460	409	39,888
August.....1931	112	186	8,979	267	989	37	7	125	11,575	735	1,827	25	289	12	17	8	21	609	16	14	59	117	248	207	277	27,070
August.....1930	171	251	9,544	277	707	32	91	142	17,086	604	2,223	51	405	33	29	3	27	436	72	26	102	184	85	399	295	33,758
September...1931	130	110	8,817	227	922	30	8	100	10,843	640	1,863	37	174	4	26	12	23	623	8	17	68	110	292	237	271	25,967
September...1930	171	191	9,716	217	1,018	33	60	155	17,531	622	1,827	63	360	41	28	3	25	402	75	21	92	172	102	317	249	33,933
October.....1931	157	148	8,709	233	988	19	5	116	9,601	769	1,695	40	227	6	44	11	15	577	8	11	44	121	308	214	237	24,713
October.....1930	186	265	8,485	144	1,738	28	60	174	18,155	768	1,797	58	391	23	28	3	30	357	56	26	91	177	198	321	252	34,237
November...1931	95	70	4,838	161	719	15	2	105	6,156	625	1,067	36	146	4	31	9	14	411	6	15	46	83	208	159	124	15,553
November...1930	119	205	5,453	137	1,243	31	24	145	11,487	378	1,145	33	214	8	25	1	29	256	38	18	52	100	258	225	141	22,012
Total 11 Mos. 1931	1,640	1,618	95,403	2,374	12,896	296	173	1,395	133,897	6,432	20,063	437	2,813	142	265	121	275	4,836	219	159	718	1,325	3,379	2,431	3,008	300,734
Total 11 Mos. 1930	1,942	3,685	112,883	2,760	14,559	470	1,277	2,007	188,076	8,701	22,784	573	4,771	402	392	28	452	6,200	691	342	1,165	2,242	1,343	4,206	4,148	391,922

THE PRESIDENT'S PAGE

CONTINUED FROM PAGE 13

areas, bringing the merchant within a telephone call of his source of supply and the manufacturer close to his raw materials, encouraging quick turnovers at greater profit.

Coordination of all forms of transportation is important if we are to benefit from their greatest usefulness. The railroads can not carry the burden of all the transportation which business and the traveling public now needs and demands. More and more railroads have come to realize that the truck and motor coach is an aid to their business and not a competitor. The next few years should see an expansion in the railroads' use of motor equipment, with a definite economic line drawn in the transportation field between what is profitable for trucks and what is profitable for railroads.

Railroads have found that trucks can successfully and profitably replace their unprofitable short line rail operations and speed service through store-door pick-up delivery systems, with containers for less than carload lots. Motor coaches are being operated by a number of railroads, offering to the public a convenient low cost service attracting revenue passengers from private cars.

The economies being effected in manufacturing, selling and in the cost of distribution will be dissipated,

however, unless our law-making bodies and commissions realize the service motorized transportation is rendering to the public.

Taxation and unfair regulatory measures are becoming a tremendous burden, which the public ultimately is called upon to pay. The future will undoubtedly see more uniformity in regulations and taxation of motor carriers as the public by experience more fully appreciates the economical, convenient and comfortable service which is rendered by highway transport.

THE STORE-DOOR PLAN AFTER 60-DAY TRIAL

CONTINUED FROM PAGE 27

him to handle, between business premises and on-line freight stations within an area as designated in the tariff for each station. This area is usually the corporate limits of the city or town, but in some three hundred places exceptions to such limits are specified by the tariff. Very often industries just outside the city boundaries are included in the store-door zone. A definite distance, as 100 yards, from the freight station may be provided. Or as in Kansas City, Mo., the district covers the adjoining Kansas City, Kan., and North Kansas City, Mo.

Up to the present time, with the

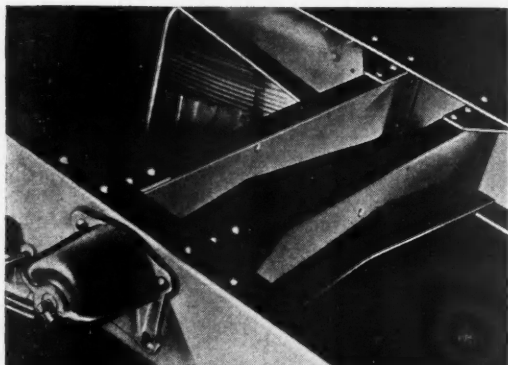
tariff in effect only about two months, the railroads and their drayage contractors seem disposed to interpret liberally both the tariff and the drayage agreement. The tariff provides that pick-ups and deliveries are to be made from "a dock, platform, or doorway directly accessible to trucks," but draymen apparently are handling merchandise, when necessary, from or to upper-story shipping rooms. The railroads seem to patronize certain draymen, otherwise desirable, who have some connection with highway trucking, although the agreements with such contractors may be terminated.

Now for the working out of the plan. It is too soon yet to tell how much tonnage it will bring back to the rails, from either the shipper-owned or commercial-trucking interests. (The tariff is designed to meet the two forms of truck competition.) After consultation with representative railroad, drayage and motor-freight men in the territory, the writer found the general opinion to be that there had been little variation in the volume of merchandise freight handled by the railroads, or in its distribution between rail and highway facilities, since the tariff became effective.

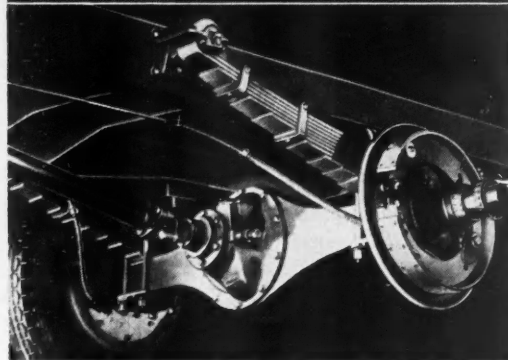
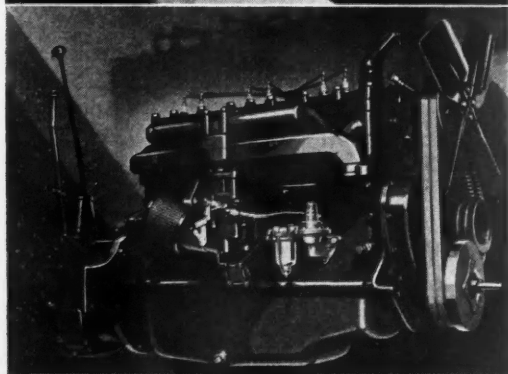
The most striking change has been in the conditions under which a considerable part of city trucking is being performed. To all intents and purposes the railroads have stepped in as

TURN TO PAGE 44, PLEASE

STUDEBAKER WHIPS UP



Cross-members are channel depth, the engines develop 75 hp. and the rears are full floating bevel drives

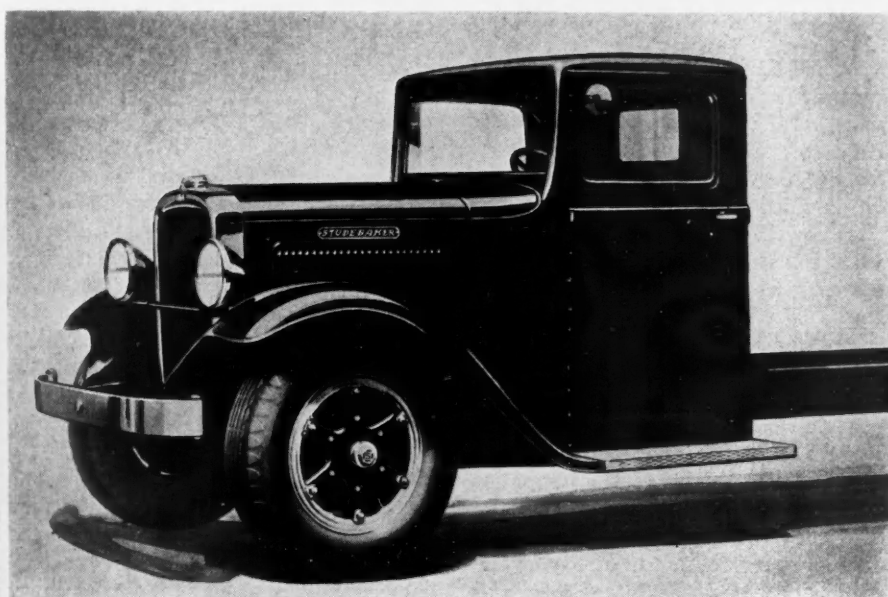


NOT content with the spectacular rise from eighteenth to seventh place in truck registrations last year, Studebaker is hot-footing it for new records this year. As a flying start Studebaker is offering a new low-priced trio, which is topped off by a \$1,350 3-tonner, the lowest price chassis listed in the three-ton classification of *COMMERCIAL CAR JOURNAL* specifications. The other models are a \$695 1½-tonner, and an \$895 2-tonner. And as plus value the new line also offers greater power than previous models and the choice of more and longer wheelbases. Studebaker also has the honor of being among the first big manufacturers to adopt S.A.E. recommendations for dimensions from back of cab to center of rear-axle in order to standardize

body mounting dimensions.

Horsepower has been increased to 75 at 3200 r.p.m. in Studebaker's new 3¼ x 4¾-in. truck six, which powers all three of the new truck models. Besides being ½-in. longer in stroke than the former six, several engineering advancements have been incorporated in the powerplant. Pistons are electro-plated cast-iron, bringing two dissimilar metals into contact; crankshafts are doubly balanced, counter-weighted and equipped with Lanchester vibration dampers; engine mountings are rubber and main bearings are steel-backed, babbitt-

POWER IN NEW LINE



The cab contributes to smart front-end appearance. Battery is concealed in the cab skirt.

Studebaker's 1932 Trio

	1 1/2-ton	2 1/2-ton	3-ton
Price	\$695 to \$775	\$895 to \$945	\$1,350 to \$1,425
Wheelbases ...	130 and 165 in.	141, 153, 165	141, 153, 165, 183
Tires, front ...	6.00/20	6.50/20	6.50/20
rear, single ...	32 x 6	36 x 8	
dual ...	6.00/20	6.50/20	32 x 6

lined. Careful balancing, matching and fitting of parts are painstaking requirements in the assembly of the new six. Piston and connecting rod assemblies are matched and balanced to 1/8 of an ounce and crankshaft and pistons are held to a tolerance of .0005 in.

Another new engine feature which makes an outside oil-filter unnecessary is a floating intake, located in the crankcase, which feeds clean oil to the pump. Fuel is fed by pump from a 20-gal. tank to a Stromberg carburetor. Cooling is by flat-tube type radiator. Air cleaners and governors are standard on the two larger models.

While four-speed Warner transmissions characterize the line, additional pulling power is obtained in

the 3-tonner by a two-speed auxiliary transmission with a 1.52 gear reduction mounted amidships. This, together with one standard and four optional rear axle ratios, gives the purchaser a wide choice to meet most any operating requirement. Special bevel drive full-floating rear axles are employed on all models, a Clark in 1 1/2-tonner and Timkens in the remainder.

Frames range from 6 to 8 in. in depth, according to capacity. Main cross-members are full channel section and gusseted at points of stress. Special attention has been given to spring equipment. Rear springs are carried on outrigger type hangers of sturdy design riveted to the frame. Auxiliary springs are standard on the 3-ton tractor and available at extra

cost on all other models.

Bendix four-wheel, two-shoe, cable controlled type brakes are used throughout the line. The 3-tonner, however, carries in addition a BK booster. Heavy molded lining, 1/4-in. in the lighter models and 3/8-in. in the 3-ton, is used.

A smart cab as well as a full line of stock bodies are offered on all chassis. The cab is of steel construction, with steel box section front corner posts, to which the separate all-steel cowl fastens. Sloping windshield and cowl ventilator gives a coupe front. Doors are 31 in. wide and weather-stripped; windows are 25 in. wide and 18 in. deep. Seats for three are 48 in. wide and comfortably upholstered. Interior door handles are of the remote control type.

STEWART-WARNER AMPLIFIES PEDAL PUSH MECHANICALLY

A MECHANICAL power amplifying unit for brake systems and a four-wheel brake system which embodies the power unit are offered by Stewart-Warner Corp., Chicago, to meet present-day demands for braking ability. The power unit may be added to vehicles now in use or built into transmissions as original factory equipment. The brake system is available as original equipment.

The power unit multiplies pressure placed upon the brake pedal and therefore drivers can "feel" the brake application. In addition the unit provides something of the order of twice as much movement of brake pull rods as ordinary mechanical brake systems for a full stroke of the pedal. A light pedal action and shorter travel of the pedal result from these inherent features of design.

Wheel brakes are of the two-shoe, cam-operated type and with use of a separate power unit there is no need for multiplication of pedal effort by wrapping or other self-energizing action. All parts are interchangeable front and rear except the camshafts and the brake backing plates also may be made interchangeable.

Mechanical power amplifiers require some outside source of power, usually taken from a revolving shaft. Stewart-Warner engineers took advantage of the fact that a vehicle propeller shaft is rotating as long as

In 4-Wheel Brake System Offered for Original Equipment

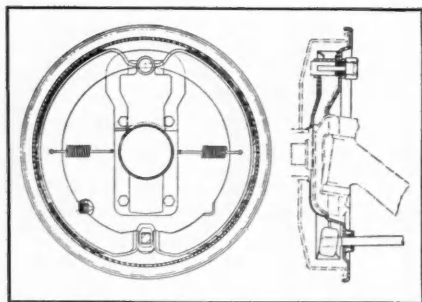
the vehicle is moving and they placed the power unit in the drive line at the rear of the transmission. Action of the unit provides a limited amount of braking on the propeller shaft.

An interesting variation of the thread and nut principle is the basis of the power unit's ability to multiply pedal pressure. The action can be illustrated by imagining a threaded stud being revolved in a lathe. On the thread is a nut which is not a tight fit on the threads. As the stud revolves the nut revolves with it, the friction in the threads without outside resistance being sufficient to carry it around. Now imagine that the nut is grasped by a pair of pliers, it immediately moves along the rod rather than revolving with it. Substitute a clutch for the pliers so that the nut can be allowed to revolve freely or at any desired slower rate than the shaft and we have the basic principle.

Application of this idea is shown in the cross section at right below.

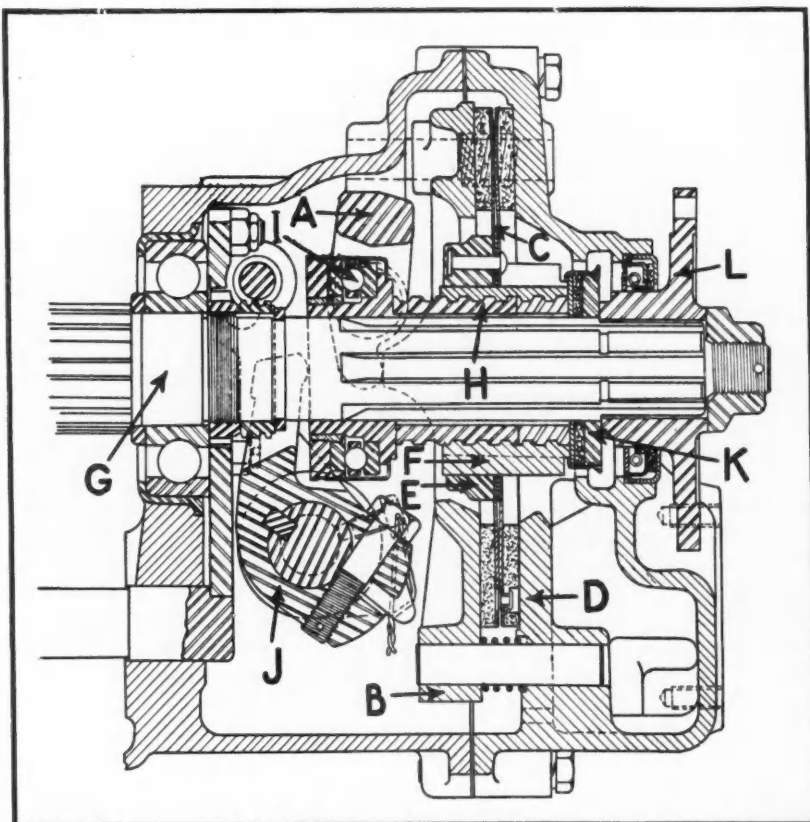
The hub *E* corresponds to the nut and it rotates with the transmission shaft *G*. When pressure is applied to *B* by moving the brake pedal the disk *C* is retarded and through the action of the coarse thread on *F* and *H* the outer actuator *F* moves and applies the brake through thrust bearing *I* and yoke *J*. When the vehicle moves backward *F* abuts against collar *K* and its rotation relative to the shaft forces *H* forward, applying the brakes as before. A lever on the outside of the power unit actuates pull rods extending to brake cross shafts on front and rear axles.

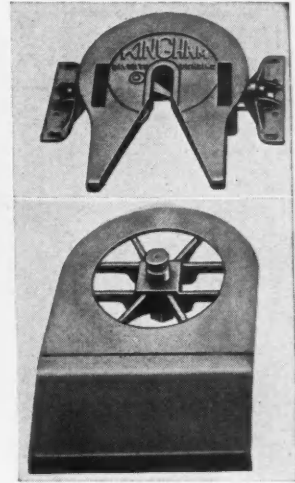
Brake cams are located with their centers in the axis of the king pins and as a result front brakes are gradually released when turning corners. There are two adjustments on the brake, one for wear of the lining and the other for centralizing the shoes. Wear adjustment is made by a stud at the anchorage which has inclined bottom surfaces against which rest inclined ends of the brake shoes. The centralizing adjustment is made by means of a set screw with tapered sides.



Above: Each pair of shoes is actuated by a cam mounted on a floating camshaft

The power unit as placed behind the transmission for Hotchkiss drive. The revolving clutch disk *C* is gripped between *B* and *D* by moving the brake pedal. Amplified power is applied by *F* or *H* moving along their threads and so forcing thrust bearing *I* against short lever on output yoke *J*





Left: A delivery of four of Kingham's new pressed-steel, drop-frame semi-trailers. Right: Kingham upper and lower stationary roller-type fifth wheels

KINGHAM'S BASIC TRAILER DESIGN BUDS 7 CAPACITIES

ADHERING to a basic design in all seven models of a new semi-trailer line has enabled the Kingham Trailer Co., Louisville, Ky., to achieve a price per unit which, as one large truck distributor said, is remarkably low. Stretching from 3 to 15 tons each of these drop-frame units are counterparts of each other, differing only in the size and capacity of component parts. From a low of \$305, this is how the Kingham line complete with proper size dual balloon tires and 34-in. stationary roller type upper fifth wheels stacks up:

Model EF-2: Capacity, 3-ton; price, \$305; tires, 6.00/20; frame length, 16 ft.; frame size, 3/16 x 10 in.; spring size, 12 leaf 3 x 46-in.

Model EF-3: Capacity, 4-ton; price, \$330; tires, 6.00/20; frame length, 17½ ft.; frame size, 3/16 x 10 in.; spring size, 12 leaf 3 x 46-in.—helper 5 leaf 3-in.

Model EF-4: Capacity, 6-ton; price, \$505; tires, 7.00/20; frame length, 17½ ft.; frame size, ¼ x 10 in.; spring size, 15 leaf 3 x 46 in.—helper 5 leaf 3-in.

Model EF-5: Capacity, 8-ton; price, \$765; tires 8.25/20; frame length, 20 ft.; frame size, 5/16 x 10 in.; spring size, 12 leaf 4 x 48 in.—helper 5 leaf 4-in.

Model EF-6: Capacity, 10-ton; price, \$995; tires 9.00/20; frame length, 20 ft.; frame size, ¼ x 12 in.; spring size, 15 leaf 4 x 48 in.—helper 5 leaf 4-in.

Springs Are Underslung and Radius Rods Are Adjustable

Model EF-7: Capacity, 12-ton; price, \$1,295; tires 9.75/20; frame length, 22 ft.; frame size, 5/16 x 12 in.; spring size, 16 leaf 4 x 48 in.—helper 7 leaf 4-in.

Model EF-8: Capacity, 15-ton; price, \$1,595; tires 10.25/20; frame length, 22 ft.; frame size, ¾ x 12 in.; spring size, 20 leaf 4 x 48 in.—helper 7 leaf 4-in.

To permit the use of wide 39-in. frames together with dual balloon tires the main springs are slung under the axle and attached to deep spring brackets riveted directly beneath the frame side-rails. This construction also provides low loading height, adequate spring travel and reduces twisting effect on the frame. Helper springs are mounted above the axle. Instead of shackling, spring ends ride free in slip joints. Adjustable radius rods keep the axle in position.

Pressed out of steel all the frames have a uniform drop of 6-in. but vary in deck lengths from 51 to 61 in. Seven cross-members (eight in the last two models) join the side-rails. They correspond in depth to side-rails at point of juncture, where they are riveted and reinforced by gusset plates both top and bottom. Shuler axles of 2¼ to 4-in. square section are employed.

Any one of these models can also be furnished with 24 or 33-in. semi-automatic lower fifth wheel, roller bearing screw type landing gear or dolly, and Warner electric or BK booster brakes.

Kingham also furnishes a full line of bodies specially designed for this new trailer line, including platform, stake, all steel van, open van and 1000 and 1500-gal. tanks with one to five compartments.

SHOP HINTS

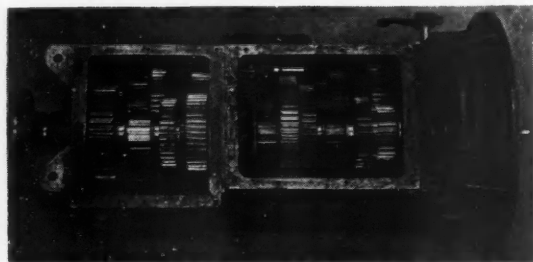
CONTINUED FROM PAGE 32

a double-end giant socket, handle and supporting stand. The socket section is a round bar of steel with a socket forged on each end, sized to fit both sizes of jackshaft nuts.

Two holes are drilled through the bar, and Chevrolet drive shaft used for leverage. The stand, which is made of standard pipe and fittings, is adjustable to any height in increments of ½ in. by inserting a heavy cotter pin in one of the holes drilled in the inner telescoping pipe. With the set-up complete the mechanic bears down on the end of the handle with all of his weight. And there you are.

A similar idea is used by C. H. Willey, superintendent of Hoyt's, Pennacook, N. H. He uses a V-block support made of wood, a heavy-duty socket and welds a bar of steel on the socket. Leverage is applied by the well-known piece of pipe.

RELAY COURTS 1932



Something new: A unit-mounted transmission combination which comprises a four-speed transmission to the rear of which a three-speed auxiliary is bolted. Ratios range from 10.19:1 in low-low to .77:1 with forward set in direct and auxiliary in overdrive. Twelve forward and three reverse ratios are provided

WHEN the year 1932 rewards leaders in progressive engineering, Relay will be worthy of recognition for features incorporated in its two new trucks, Model 230, a 5-ton, 30,000-lb., high-speed, heavy-duty job, and its heavier companion, Model 240, rated $7\frac{1}{2}$ tons or 40,000 lb. gross. Engines, transmissions, rear axles, frames, in fact the whole chassis, embody ideas new to the truck field as well as original applications of accepted practice. Some high spots of the design are listed in the accompanying box.

Snappy performance while carrying heavy loads either on good roads or through bad going has been assured by providing plenty of engine torque and a lot of transmission ratios for applying the power as needed. The transmission, one of the innovations, is a combination of a four-speed set with a three-speed auxiliary made into a single unit which furnishes a total of 12 forward speeds and no less than three reverses. The lowest ratios in low-low give enormous tractive

ability figures, and the overdrive ratio of 77:1 in the auxiliary assures high speeds for "high-balling" home from long trips without winding up the engine. In fact, the engines are not called upon, or permitted, to race under any circumstances; vacuum governors control speed at 2000 r.p.m.

Engines are Relay-Hercules in both models, similar in general design but differing in size, 6- $4\frac{3}{4}$ x 5 $\frac{3}{4}$ and 6- $5\frac{1}{4}$ x 6 in. developing 126 and 162 hp. respectively. Displacement of the large engine, 779 cu. in., equals the high figure now held jointly with the Sterling Petrel. Cylinders are cast in two blocks of threes. The upper crankcase is of aluminum alloy.

Explosions in engine cylinders tend to blow the cylinder heads off and to force the crankshaft downward. This force usually is absorbed by three sets of studs, those holding the heads to the block, another set holding the cylinder block on the crankcase and a third set holding the main bearing caps firmly against the crankcase. In these engines this force is taken by 16 through bolts which extend from cylinder heads to main bearing caps.

Intake valves are larger than exhaust, 2 $\frac{1}{8}$ and 2 in. respectively, and both have the unusual seat angle of 30 degrees. Exhaust valve seats are inserted type with spun-in Stellite

surface. This material is so hard that it cannot be machined and is shaped and finished by grinding.

Although the engine lubrication is full-pressure type, it too departs from the conventional. The oil pump is triple in design, one pump feeding the main oiling system and the other two are scavenging pumps, which pump oil from each end of the crankcase into the main sump, assuring a supply of oil to the main pump when the vehicle is climbing or going down steep grades.

Downdraft carburetors are employed, 1 $\frac{3}{4}$ -in. diameter on Model 230 and 2-in. diameter on Model 240. Oil-sump type air cleaners are used on both models.

High-speed, heavy-duty operation demands adequate braking ability, and Relay engineers have not overlooked this prime requisite. On Model 240 they supply Christensen air brakes of special de-

WITH 10 INNOVATIONS



Progressive Design Ideas Incorporated in 5-Ton and 7½-Ton Heavyweights Are:

1. Nitralloy Counterbalanced Crankshaft.
2. Nitralloy Pump Shaft.
3. Molybdenum Alloy Iron Cylinder Blocks.
4. 12-Speed Combination Transmission.
5. Interchangeable air and liquid brake cylinders.
6. Radius Rods with Roller Bearings.
7. Thermostatically Controlled Radiator Shutters.
8. Special Frame Construction.
9. Shatterproof Glass All Around.
10. Hot Water Cab Heater.

Also unusual are the Stellite Exhaust Valve Seats with 30 deg. angle.

sign for the job, with wheel cylinders inside the dust plates. Area of lining is 550 sq. in. and the lining is ⅜ in. thick. No adjustment is required.

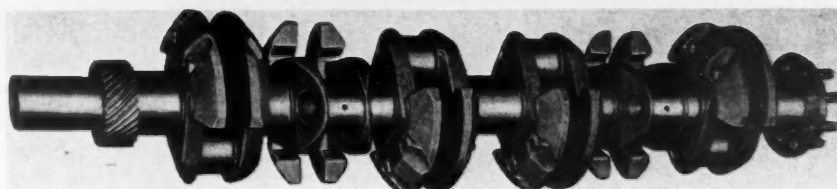
Brakes on Model 230 are four-wheel hydraulic with total area of 529 sq. in. with ⅜-in. lining. Christensen air brakes can be used as air and liquid wheel cylinders are interchangeable.

Frames are made of alloy steel, heat-treated, and of the fish-belly type. Model 230 has frame 11½ in. deep and Model 240, 12½ in. deep. Six wheelbases are available, lengths being the same on both models. Shortest is 160 in. for tractor service, next, 174, for dump work or 10½-ft. bodies, 196 for 14-ft. body and 210 for 16-ft. body. The long wheelbases of 224 and 240 in. are at extra charge.

Relay and Brown-Lipe engineers cooperated in designing the transmission unit. Unlike other combinations in which one of the transmissions is unit-mounted and the other placed amidships, the Relay trucks embody a unit-mounted combination with a four-speed set bolted to a bell housing and the three-speed auxiliary bolted directly to the rear of the four-speed section. A 2-leaf spring is mounted at the rear of the assembly to flexibly support the weight.

Spring seats are below wheel centers on the new Relay pendulum-drive rear axle, which permits low frame

height without kickup over rear axle. The differential carrier supports bevel gear bearings and the differential.



Top: Plated radiator shell, hood doors and sweeping horizontal lines emphasize the modern truck mode. The cab, which is insulated throughout, is equipped with shatterproof glass throughout and is heated by hot water. Radiator shutters are controlled thermostatically. Bottom: Innovations by Relay are the counterweighted seven-bearing crankshafts of nitralloy, used in both engines. Two counterweights are attached to webs of each crankpin.

WOOD 1½-T D-6 HOIST

Listed at \$192
With C4 Body

IN bringing out its new power-operated hydraulic hoist for heavy-duty service on 1½-ton chassis Wood Hydraulic Hoist & Body Co., Detroit, did more than round out its light-truck line of hoists; it brought out an uncommonly low-priced unit.

This new hoist, known as Model D6, equipped with a contractor and general hauling Model C4 body of the following capacities, is priced as follows:

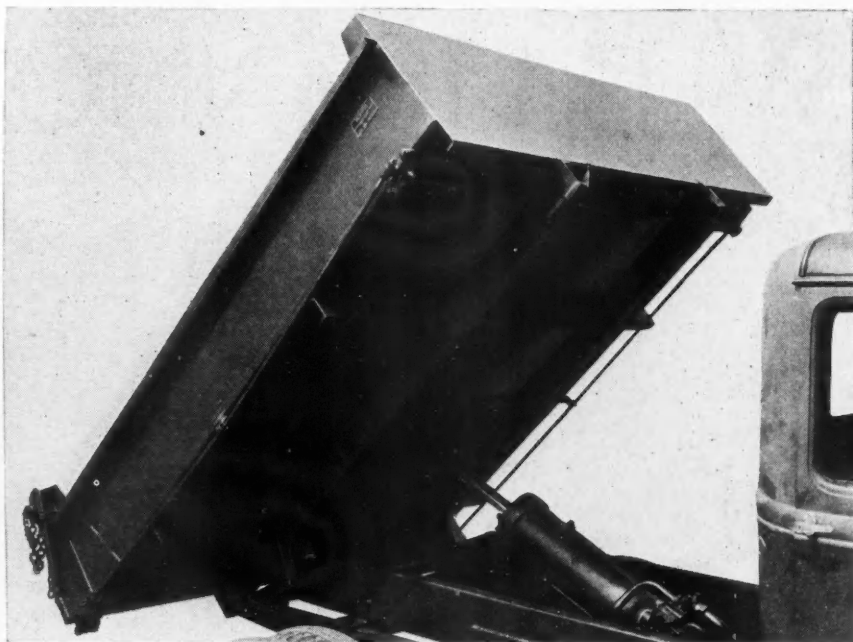
1 yd., \$192; 1½ yd., \$195, and 2 yd., \$203. The new hoist is also available at the same relatively low prices on the following Wood bodies: C10, C12, C1, CJ1 and C6.

Design is rugged and simple. A 6-in. cylinder of seamless steel is mounted so that the piston pushes directly against the load, at a considerable distance from the hinges, to

provide greater leverage and ease of operation. Full dumping angle is 50 deg. In addition to the 6-in. cylinder there is also an extra-heavy steel piston rod, heavy-duty hinges of drop-forged steel, full-size oil pump and

heavy-duty fittings throughout.

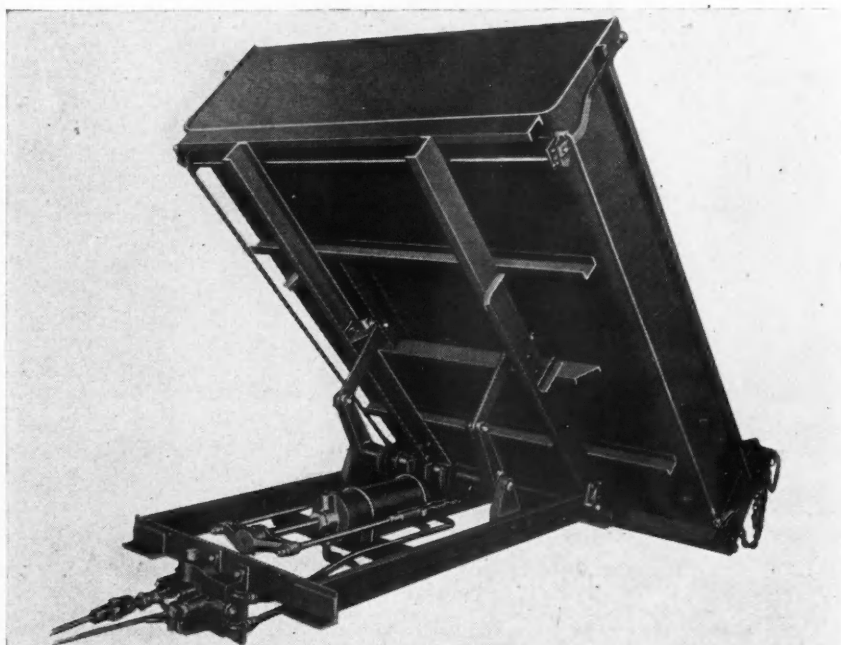
No wood sills are required when installing the D6 hoist, as the hoist and body come ready mounted in a pressed-steel subframe, needing only to be bolted to the chassis.



Wood Hydraulic's new D6 power hoist assembled with a C4 steel body on a 1½-ton chassis

PERFECTION CUSHIONS HOIST

Built for 1½-Ton
Short Dump Truck



Piston rod and cross-head pulls the body up through pull rods and chain connected to quadrant on cross-shaft

AMBITIOUS dump truck drivers anxious to make time will be given an opportunity to save a bit on un-

loading with the new heavy-duty hydraulic hoist for 1½-ton short wheel-base chassis offered by the Perfection

Steel Body Company, Galion, Ohio.

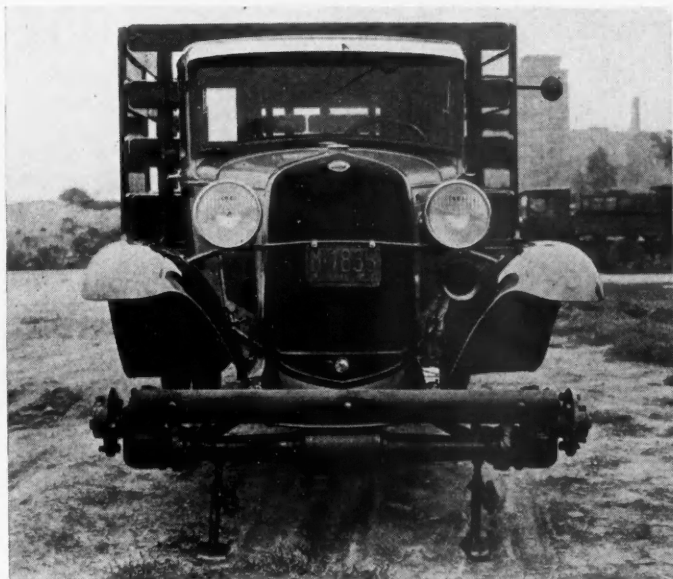
Fast lowering speed with slow finish is uncommon. Perfection has attained it with a "Cushion Drop" mechanism or automatic control, which permits the dropping of the body, either full or empty, very rapidly to riding position without slamming the frame. The hydraulic cushion becomes effective when the body frame comes to within several inches of the chassis, at which point it eases down the body to full riding position.

The hoist also possesses speed on the lift, raising a load to a full 50-deg. angle in less than four seconds. The body may be returned to any intermediate position by controlled gravity. For safety an automatic valve mechanism is built into the hoist. It will hold the body in any raised position in case the power fails or clutch is accidentally released.

A complete line of steel bodies is available for this new unit.

ASAM UNIT CONVERTS FORD INTO FOUR-WHEEL DRIVE

Designer Also Adapts the Assembly to Other Makes



Above: The Asam front drive unit does not materially change the appearance of a truck in which it is incorporated



Below: Turret drive of front wheel embodies two pairs of bevel gears permitting a wide turning angle and eliminating universal joints

THE exceptionally low list price of less than \$1,400 for a four-wheel drive 1½-ton truck has been attained by the Asam Truck Co., Detroit, by developing a unit for converting Ford, Chevrolet and other trucks of 1½ to 2 tons rating into four-wheel-drive vehicles. Price of the Ford AA truck converted is approximately \$1,365, and price of other trucks when converted will be the difference between list price of the Ford and the other truck added to the converted Ford figure.

Trucks converted to four-wheel drive by the Asam front drive assembly are not changed in height or general appearance. From a side view a careful inspection is required to detect the change and even from close range directly in front there is not much difference in appearance between the Asam axle and conventional front axle. Front springs and, in case of Ford, radius rods are retained. The Asam construction provides a reduction at the end of the axle and therefore the center ring gear need not be as large as the ring gear in

the truck rear axle and therefore the differential housing may be smaller in diameter.

Double-bevel-gear drive, which eliminates front-wheel universal joints, was chosen by F. H. Asam, designer of the units. He applies the term "turret drive" to the assembly because of the resemblance to mechanism of a warship turret. The turret, mounted on anti-friction bearings, comprises a lower ring gear placed horizontally and an upright hub and upper gear. A bevel pinion mounted at the end of the axle shaft drives the lower ring gear; the upper gear on the turret in turn drives a vertical ring gear on the end of the wheel hub.

The bevel pinion shaft has a splined end connected to the splined end of the axle shaft by a tubular coupling. Pinion shaft bearings are rollers back-to-back. The turret revolves in a double annular bearing at the bottom and long, straight roller bearing at the top. The driven wheel hub revolves on a double annular ball bearing at the outer end and a straight roller at inner end. The steering knuckle as-

sembly oscillates on roller bearings top and bottom for steering.

Upper and lower parts of the turret are sealed against leakage of lubricant by packed lap joints. Tests of the unit over several hundred miles with the felts and oil retainers removed showed no loss of oil, according to report by Mr. Asam.

Drive to both forward and rear axles is through a gear type transfer case mounted in the rear of the truck transmission. To still further increase the tractive ability of the job a locking type of differential is used between the half shafts driving the front and rear axles; the same type of differential is also incorporated in the truck rear axle.

The unit now available can be incorporated in any model truck up to 2 tons in capacity and with comparatively small extra cost can be attached to passenger car or light delivery chassis. A larger unit has been developed for trucks from 3 to 7 tons carrying capacity, but prices and details of construction are not yet available for publication.

STEWART FOLLOWS THROUGH WITH STILL ANOTHER EIGHT

Also Drops New 2-Ton Six to \$1,195

of cylinders to be announced by the company, the other two being a 3-ton for \$2,990 and a 3½-ton for \$3,990. The new eight is priced at \$2,390, which compares with an average price for 2½-ton models in the Specifications Table of \$2,941.

Adding the eight gives Stewart three models in the 2½-ton group, and the eight, designated 58-8, has more power than the other two, 100 hp. at 2800 r.p.m. Model 58-8 is supplied, on order, with several options at extra cost; magneto in place of Delco-Remy battery distributor, a Timken double-reduction or worm gear rear axle in place of the standard Clark bevel gear unit and a three-speed auxiliary transmission. However, the auxiliary unit may be used only with worm or double-reduction type rear axle. Standard wheelbase is 170 in. and four others are available, a short wheelbase of 160 in., and three specials, at extra cost, namely, 180, 196 and 226 in. Detailed specifications will be found in the Specifications Table.

The 2-ton job, Model 50X, is priced \$1,195, which is \$300 less than Model 28X, which has been dropped from the Specifications Table. The six-cylinder engine is a Lycoming SB with ⅜ in. more bore and the same stroke as the 4SL employed in Model 28X.

A Clark spiral bevel, full-floating rear axle is used, as in the other model, but drive and torque are taken through springs, instead of by radius rods. Standard ratio is 6.37: 1 and a faster ratio of 5.6: 1 is offered.

Standard wheelbase of 145 in. and a special of 134 in. are optional at no extra cost, and long wheelbases of 160 or 176 in. are available at extra cost. Chassis price includes 6.50/20 balloons, dual rear. Special tire equipment of 750/20 balloons or large single tires may be ordered at extra cost.

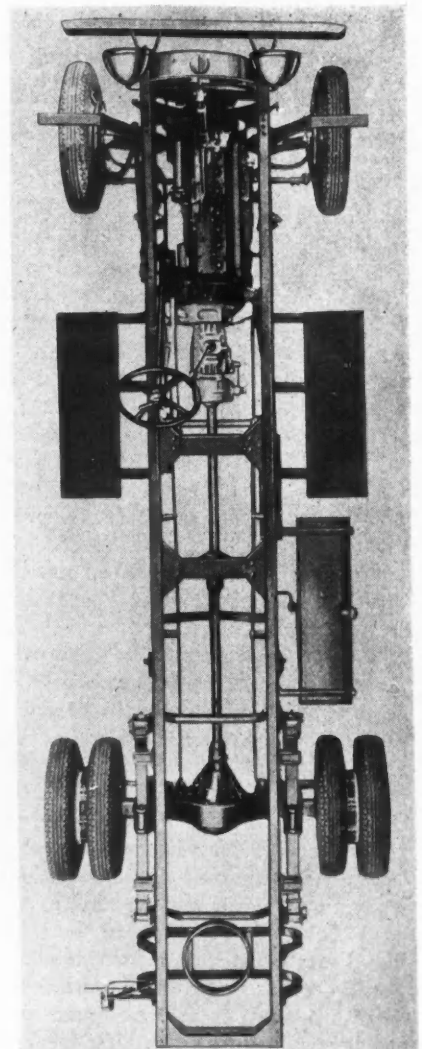
A FACTORY which offers a new six-cylinder model with more power for \$300 less than the model it replaces, and presents an eight-cylinder job priced more than \$500 below the average price of its tonnage group, gives evidence of its intention to offer greater value for its customers' dollars. Stewart announces both of these accomplishments in time for the New York Automobile Show and adds an increase in engine size, at no extra cost, in three other models.

The eight, a 2½-tonner, happens to be the third model with this number

Specifications of Models 58-8 and 50X

	58-8	50X
Price	\$2,390	\$1,195
Capacity	2½-ton	2-ton
Engine make	Lycoming	Lycoming
size	8-3¾ x 4½	6-3¾ x 4½
Transmission	Fuller	Warner
Speeds, mounted	4-unit	4-unit
Rear Axle	Clark	Clark
Type	bevel full-floating	bevel full-floating
Tires	7.50/20 dual rear	6.50/20 dual rear

Detailed data will be found in the Specifications Table



Stewart's third Eight, Model 58-8, a 2½-ton truck

Diamond T Model 216 B, the Improved
1932 Edition of former Model 216



DIAMOND T 1½ BETTERS ITS PREDECESSOR ON 14 POINTS

A 60 PER CENT increase in sales during 1931 when the going was stiff warrants a bit of strutting, and certainly a move toward repetition. This record was hung up by Diamond T's 1½-ton Model 216, and the company isn't content to rest on its laurels. An improved edition of it is being offered as a 1932 encore. This new lead-off model, with fourteen featured improvements and refinements, lists at \$795 and retains its former designation 216 plus the sur-letter B.

Downdraft carburetion and control in the intake manifold are among the notable improvements in the engine, a rubber-mounted Diamond T-Hercules 3½ x 4¼-in. six, which displaces 228 cu. in. and develops 56 hp. at 2500 r.p.m. Pistons are lightweight cast-iron.

Changes from the 216 originally introduced include a Clark axle having greater capacity, larger wheel bearings and incorporating a splined pinion shaft carried on three roller bearings; springs of greater capacity

and 4-leaf helper springs as standard equipment; and a Borg & Beck 10-in. clutch with flexible plate mounting, which acts as a vibration dampener. Riding comfort has been increased by the adoption of hydraulic shock absorbers. Gasoline and hydraulic fluid lines have been simplified, and a new automatic supply tank for the braking system is now built integral with the master cylinder. A convenient opening under the hood makes replenishment of the system an easy task.

Four-wheel Lockheed brakes with 15-in. cast alloy iron drums and moulded lining do the stopping and an external band brake on the end of the transmission does the parking. Ease in handling and front-end strength were particular objectives of the engineers when they put extra large king pins in the front axle, employed

Hood, Cowl and Cab.
Are Streamlined

Ross cam and lever steering, and hung extra long front springs in compression type rubber bushings in the rear and shackles in front.

By careful design, strength without excessive weight was achieved in the tapered pressed steel frame. Special cross members of the alligator jaw type are used. A new type front cross member and engine support, designed by A. O. Smith Corp., provides stiffness at this point.

A special de luxe all-weather steel cab has been specially designed for this model. Particular attention is given comfort, convenience and appearance. Cowl and cab treatment have been carefully worked out to provide harmonious stream-line appearance. Equipment includes lights, heat indicator, speedometer and oil gage.

THE STORE-DOOR PLAN AFTER 60-DAY TRIAL

CONTINUED FROM PAGE 33

the major agency for handling shipments between their stations and business premises. Although most of the freight moving under the store-door tariff is being handled by the draymen for the same shippers they had previously served, the railroads foot the drayage bill, and retain control through a clause in the agreement which provides for its termination immediately upon written notice, when the services of the drayman are unsatisfactory to the railroad.

More than 75 per cent of the freight picked up under the tariff, it is estimated, comes from shippers who use the same contract drayman regularly. Others, who require service only infrequently, call up the railroad freight station, which relays the order to the drayman nearest to the shipper's premises. This system was worked out on the advice of the draymen, who pointed out that the original suggestion, to have each railroad given city-wide service by one or two draymen, involved unnecessary confusion and duplication of effort for drayman and shipper as well.

● Standing Orders Sought ●

The delivery service is made equally convenient. Regular consignees of merchandise freight have been solicited to place standing orders for the drayage of any goods that they may receive, while others can call on either the freight station or an authorized (contract) drayman when necessary.

Under the system of compensation adopted, the railroads pay a fixed rate (varying from 5 to around 10 cents per 100 lb., with the larger amount used in the largest cities), based upon the actual weight shown by the railroad records, as totaled for each calendar month. This drayage charge is included in the railroad l.c.l. rates at both origin and destination for movements between tariff stations in a 30 to 300-mile limit. Because the drayage charges are not visible the hauling function has been designated as "free service." Movements beyond either limit are subject to extra charges. The 30-mile restriction, however, has since been abolished so that the no-extra charge service now applies between all tariff stations within the 300-mile limit. The flat-rate system has been used, it is understood, to simplify the bookkeeping required by the railroads in administering the store-door tariff. For the same reason, no minimum is paid for handling a single shipment of freight.

When the drayage contracts were being arranged, many of the draymen took the position that the flat-rate system was wrong in principle and that the rates offered would prove unprofitable. In at least one place (St. Joseph, Mo.) the railroads and the draymen have not come to an understanding, so that the tariff is not in effect there. But in the other cities and towns the draymen have given both system and rates a two-month trial. The experience so far seems to confirm their original opinion.

What is needed, one prominent drayman suggests, is a system that would insure a minimum (25 cents or more) for each shipment, and in the larger cities, a group of zone rates, say 5 cents per 100 lb. in the section near the freight houses, 10 cents in an intermediate district, and 15 cents for the outskirts of the city.

The situation is further complicated by the fact that an allowance of 5 cents per 100 lb. may be granted shippers as a consideration for delivering their own goods to the freight stations. Because of this arrangement, small shipments may be "wished off" on the contract draymen, while larger lots, which would help to balance the small unprofitable movements, are handled in the shippers' own trucks.

Traders receiving freight in their own trucks are given no such allowance, however. The reason for this is to prevent station expense resulting from accumulated shipments tying up valuable space.

Another provision, which draymen regard dubiously, extends the pick-up and delivery service to long-distance shipments. Merchandise moving more than 300 miles between tariff stations is entitled to the drayage, at either or both ends of the rail journey, for an extra charge of 10 cents per 100 lb. Shippers outside the tariff territory, while they must pay for drayage at origin, can have deliveries made at any tariff station, on the same basis of 10 cents more per 100 lb.

The use of this tariff feature is likely to prove particularly attractive for small shipments, which if handled on a regular drayage rate would take a 25 or 35 cents minimum charge. A 40-lb. package could thus be delivered for a 10-cent drayage charge, but since the contract drayman is paid on the basis of actual weight, his return would be 4 cents, even in places where the 10-cent flat rate applies.

Most railmen feel that the problems which now appear so momentous to the draymen will be solved more or less automatically as all concerned, draymen, railroads, shippers, become more familiar with the tariff.

The future is likely to see more specialization, or fewer draymen, in the larger cities. Why should St. Louis and Kansas City each have twenty-five or more concerns, under contract with the various railroads, when half a dozen could handle the work to better advantage, and in profitable volume, even at present drayage rates? This is the opinion of many draymen, as well as of railroad people. The draymen realize, however, that the freight station business, with its afternoon pick-up peak and its morning delivery peak, must be supplemented by hauling work for other customers.

Merchandise shipments moving under the tariff are bound to increase in volume, the railroads believe. This will help the draymen, even though there is no change in their number.

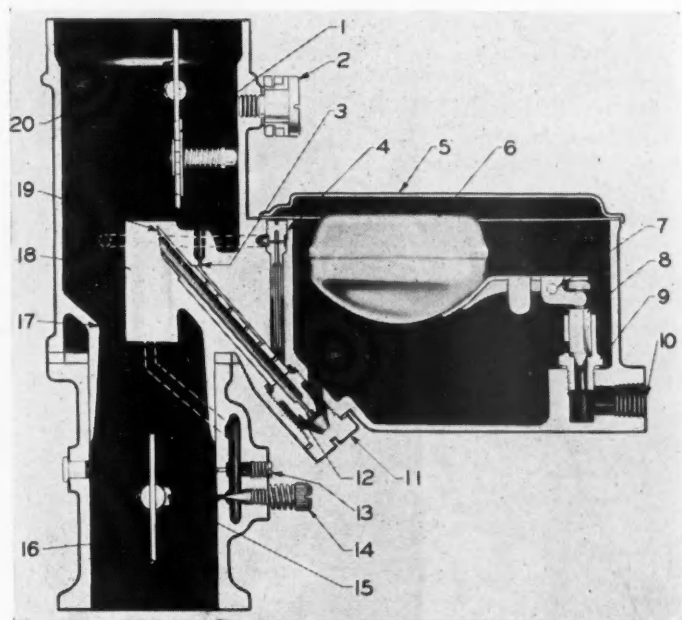
The railroads are doing their part in attracting the additional tonnage of merchandise freight, it was pointed out. On-line and off-line traffic solicitors, freight agents all over the territory, are calling the tariff to the attention of shippers and receivers. Other improvements in service are being considered. The application of the store-door tariff is being studied by all the lines, with a view to introducing such refinements as faster service, new package-car routes, later closing hours for freight stations.

● To Build Large Volume ●

Volume of railroad drayage movements in the larger cities may be augmented by taking over of trapcar movements, for which shippers are now paying an extra charge. In the smaller places the contract work of the draymen may be increased, by having them serve a group of communities, instead of their immediate home towns.

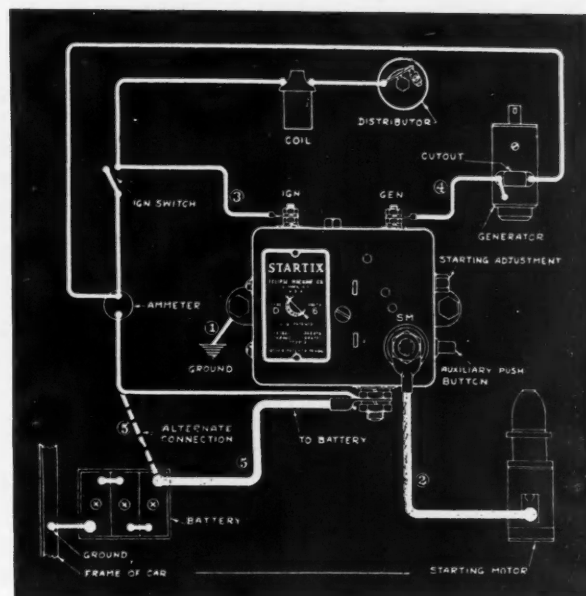
A fast limited-stop service, with the truck used to peddle freight directly to business premises in intermediate towns as well as in places off the main railroad route, has already been introduced by the St. Louis Southwestern. The Cotton Belt's "Blue Streak," advertised as "America's Fastest Freight Train," receives less carload shipments up to 5 p.m. in St. Louis. Drawn by a passenger locomotive at an average speed of 40 m.p.h., the Blue Streak makes seven stops en route to Shreveport, La. At each stop, merchandise cars are dropped off, and their contents transferred directly to waiting trucks owned by the Cotton Belt. Shipments to Memphis, for example, are in the freight car dropped off at Jonesboro, Ark., and are moved by truck the 76 miles over the highway in plenty of time to make deliveries the first thing in the morning.

BENDIX MAKES THREE CONTROLS AUTOMATIC



Above—Model E downdraft Stromberg carburetor equipped with automatic choke

At right—Wiring diagram for Bendix Startix which starts an engine with turning of ignition switch and restarts it when it stalls



DRIVERS who sometimes have trouble manipulating the choke with sufficient precision to avoid flooding the carburetor or making it spit will soon be unable to commit these errors. Nor will they be obliged to put foot upon starter pedals at just the right time. And they can hang their left feet outside cab doors or sit on them and forget clutch pedals.

Bendix designers have been devoting their talents to simplifying motor vehicle controls. First, by harnessing intake manifold vacuum they now control the clutch by movement of the accelerator pedal. Second, with a clever arrangement of wiring and relays they tie the starter up with the ignition switch so that the starter urges the engine into action as soon as the ignition is turned on and resumes the urging whenever the engine quits thereafter. And finally they remove all uncertainty about how to jiggle a choke valve by taking away from the driver the power and the need for choking the carburetor at all.

The automatic choke, which requires

an offset choke valve in the carburetor, consists of a thermostat, linkage, vacuum piston and safety release lever. The thermostat closes the choke valve when the engine is below 70 deg. and permits it to gradually open until at 120 deg. and above it is wide open. The link which holds the valve closed after the thermostat has closed it is unlocked by the vacuum piston as soon as the engine fires. The Bendix Stromberg Co. has developed a carburetor, series E, to be used with the new choke.

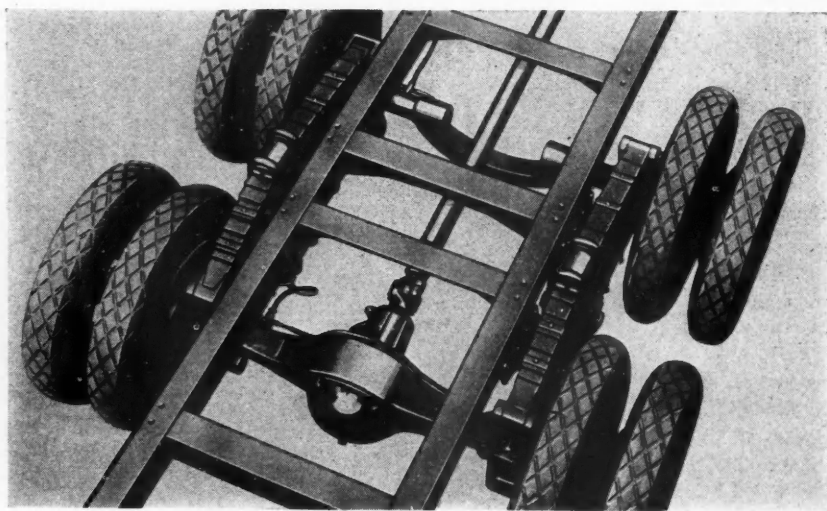
The automatic starter control, designed Startix, is an automatic switch which operates the starting motor as soon as the ignition switch is turned on. All of the working parts are assembled in a metal box to which the wiring is connected. The factory recommends 14 gage flexible wire with waterproof insulation for connection to ground, generator and ignition switch, wires 1, 3 and 4 on the diagram and that No. 1 or 0 gage cable be used for battery and starting motor connections, 2 and 5 in the diagram.

The Startix incorporates a time delay in restarting the engine so that the engine can come to complete rest before the starter is engaged to start it again. Another automatic feature is a thermostatic control which protects the starter and electric system in the event the Bendix pinion sticks in the flywheel teeth and the ignition switch is unintentionally left on. The thermostat then opens the starter circuit after about one minute and the circuit is then opened and closed at intervals until the ignition switch is turned off. This action gives a click which warns the driver to shut the switch off.

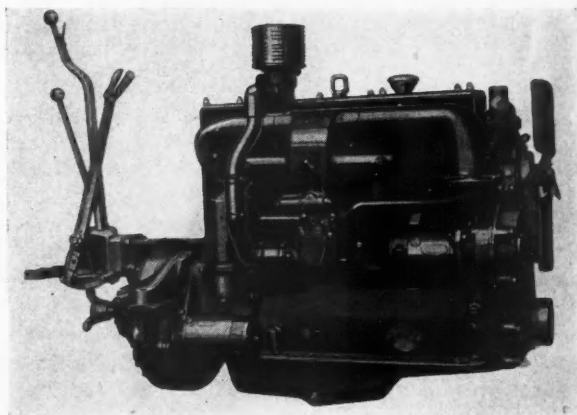
Bendix clutch control units are available for motor vehicles now in use. Although mountings and other details are different for different makes and models the major parts are the same. The clutch is released as soon as the driver's foot is taken off the accelerator. This action opens a valve in a pipe connecting a vacuum cylinder to the intake manifold. Pushing again on the accelerator closes the valve and engages the clutch.

FEDERAL WHITTLES 1½-

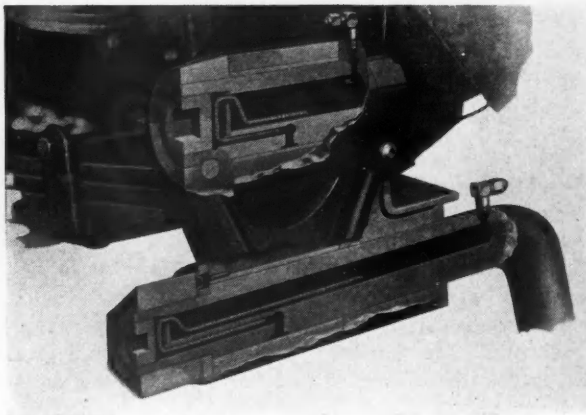
Also Puts High-Traction Differential in Two 5-6-Ton Models and Extends 6-Wheel Two-Wheel Drive Line to 4 Tons



Spring seats of Federal's new six-wheeler swivel and front axle of tandem drops to make way for propeller shaft



Six-cylinder 4¾ x 4¾-in. overhead valve engines with dual ignition are employed in Federal's new 5 to 6-tonners



Section of Federal patented Reservoir lubrication provided on the spring pins and spring cross shafts on C-7 and 8



TON DOWN TO \$695

FEDERAL MOTOR TRUCK CO., out to broaden its line, is doing just that thing. With four new models attached to both ends of its long range, Federal is firmly launched into two highly competitive fields, low price and high capacity. The low-price campaigner is a 1½-ton six priced at \$695, which is the lowest truck price ever reached in the history of the company. Besides this low price the dealer discount will be considerably above the average for a truck in this price class. The play for the heavy-duty field has been strengthened by the addition of two new 5 to 6-tonners and one new 4-ton two-wheel-drive six-wheeler, which gives Federal a well-graduated line on the heavy end.

Model E-3, the designation of the 1½-tonner, in appearance and design closely approximates Federal's 1½-ton Model E-2. While engine size, 3% x 4 in., remains the same, 20 per cent more power is obtained largely by stepping up speed 30 per cent to 3400 r.p.m. This faster engine with the slower standard rear axle ratio of 6.375:1 gives better acceleration and high-gear pulling ability. Optional ratios of 5.66:1 and 6.857:1 are available, according to speed and torque required. The 5.66 ratio provides a speed of 47 m.p.h. at 2800 r.p.m. Maximum engine horsepower is reached at 3100 r.p.m.

Featured among the improvements are a chrome-plated radiator, an automatically lubricated fan, full automatic spark advance, fuel feed by camshaft driven pump, dropping of the exhaust pipe at the front of the

block to keep heat and fumes out of cab, ventilated clutch housing and a clutch throw-out bearing lubrication extension through toe-board.

Model E-3 is available in four wheelbases 130, 142, 154 and 166 in. The shorter has a single propeller shaft, while two-unit shafts are used on the others. Wheels are of the ventilated disk demountable type with integral rims.

The two new 5 to 6-tonners, carrying a vehicle gross weight rating of 24,000 lb., are identical except for braking systems. Model C-7 is equipped with hydraulic and C-8 with Westinghouse air brakes. These models are improved editions of Models 4C-6A and 4C-6B, which they supersede. Prices remain the same in spite of increased capacity, increased engine size, larger tires, deeper frame fish-plates, more attractive fenders, Federal Reservoir spring lubrication system, etc. The engine is a Continental 20R 4% x 4% in. six with dual ignition developing 100 hp. at 2200 r.p.m. The rear axle is a Timken double reduction or worm as formerly but incorporates the new high-traction differential. Axle ratio also has been raised to 7.92:1 from the former standard of 7.6:1. Four optional ratios ranging from 7.08:1 to 11.35:1 are available. For more details on major units see the Specifications Table.

Battery and tool box are located at opposite sides between frame side-rail and running board splashers, with a hinged cover in the splashers. Front spring pins are extended across the frame to form a solid tie. Twin horns

are mounted below the head lamps and there is an arched tie-rod between fenders.

The new six-wheel, two-wheel drive, 4-ton truck which is designated as Model A6SW extends Federal's range of six-wheel vehicles into a higher tonnage classification. As the model number indicates, the major units of this new job are the same as incorporated in the 4-wheel A-6 model. Of the two rear axles the rear unit furnishes the propulsion.

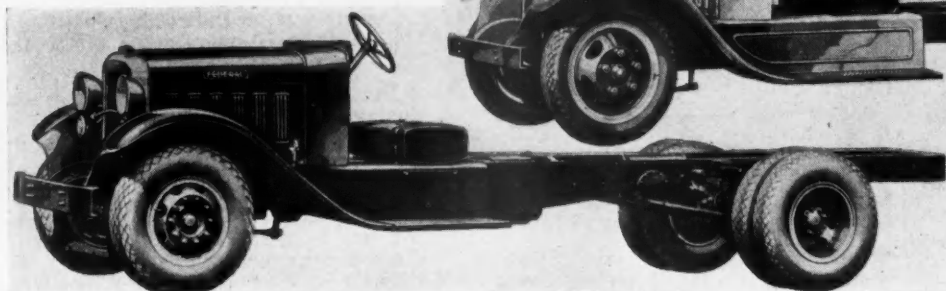
The truck has a gross rating of 18,500 lb. and is powered with a Continental 16C six-cylinder engine and is priced at \$2,360 and \$2,385 for the 164 and 182-in. wheelbases.

The six-wheel unit used in the new four-tonner is of the general design described recently in these columns with the introduction of the 3-ton Federal six-wheelers. A point of difference, however, is that in the 4-ton truck, the central spring seat, where the two springs on each side are carried at the frame, is of a swiveling rather than fixed type. This change is made to increase the flexibility of the unit, allowing greater vertical movement of wheels, thus permitting the axle unit to adjust itself to large road irregularities.

Trunnion and spring pins in the six-wheel unit are exceptionally large, and are automatically lubricated by Federal Reservoir system at springs.

As on the 3-ton six-wheeler, six-wheel hydraulic brakes are provided. These are 16 in. in diameter and 2½ in. wide, with a vacuum power booster to further decrease pedal effort. Final drive is by bevel gear.

Right: Model E-3, the new \$695 1½-ton model



Left: C-7 has Lockheed brakes with booster and C-8 Westinghouse air



AUTOMOTIVE FLASHES

Ford Truck Four?

Whether Ford decides to put six, eight, nine or twelve cylinders in his new model, some four-cylinder model AA trucks will be available early this year. Dealers have been advised that they may expect, and will be expected, to sell trucks, rumors and counter-rumors of a new chassis to the contrary notwithstanding.

Unleashes Service Leasing

Sterrett Operating Service, under which trucks with complete service are leased, has been extended to Baltimore, Md. The operating company is a subsidiary of General Motors Truck Co. and is headed by John A. Sterrett. Fred Fisher is Baltimore manager.

Frozen Food Ranks Expands

Extension of the activities of the Frozen Foods Association of America by the formation of an Equipment Division is announced by H. P. Stuckey, president. The new division has opened an office in the United Artists Bldg., Detroit, and Wm. Jabine has been appointed executive secretary.

Trucking, a Commodity

Transportation is a commodity—whether rail, highway, water or air—and it will be sold by the agency which suits the customer, A. J. Brosseau, president of Mack and vice-president of the N.A.C.C., told members of the Atlantic States Shippers Advisory Board recently.

G.M.T. to Rebuild Engines

Completely remanufactured engines as replacements for truck engines needing overhauls or major repairs is a new plan just inaugurated by the General Motors Truck Co. Orders can be placed through any General Motors unit.

"When Good Fellows—"

Chevrolet started early this month a nationwide series of sales meetings which will bring together during the next two months 50,000 salesmen, dealers, bankers and region and central officers. Better management and merchandising are the purpose.

Is it Constitutional?

Arguments on the constitutionality of Texas motor truck law will be heard in United States District Court at Dallas, Jan. 8, with three Federal judges assigned to the case.

I.C.C. to Sleuth

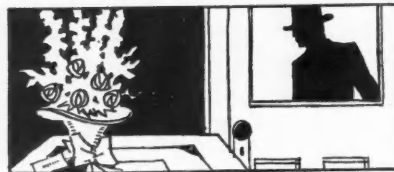
The Interstate Commerce Commission is planning to investigate whether motor, water and air carriers operating in competition with the railroads are receiving direct or indirect government aid. This is part of a general program to determine whether restrictions are warranted.

Still Standardizing

Investigation and study as to what can be done with regard to greater dimensional standardization and interchangeability of major parts is being actively prosecuted by the Motor Transport Advisory Committee of the S.A.E. in association with the Quartermaster Corps of the U.S. Army.

Florida Snips 4,000 lb.

Florida State Railroad Commission announced that motor trucks operating as common carriers under its supervision will be limited to a gross load and vehicle weight of 20,000 lb. The former limit was 24,000.



PERSONNEL CHANGES

★W. H. Woodin was elected president of the American Car and Foundry Motors Co. at a recent meeting of the board, succeeding C. S. Sale, resigned.

★Ray A. Long, an old-timer in the automotive industry, has been appointed assistant sales manager of Continental Motors Corp.

★H. S. Snodgrass was named vice-president, in charge of manufacturing, at a board meeting of the American-LaFrance and Foamite Corp.

★Wm. H. Zeiler Co., Inc., of Minneapolis, has been appointed FWD distributor for the state of Minnesota.

★J. C. Compton and W. A. Casey have been appointed general managers of General Motors Truck Co. branches in Philadelphia and Detroit, respectively. Mr. Compton relieves P. E. O'Connor at Philadelphia and Mr. Casey succeeds Mr. Compton at Detroit.

★Official personnel of the Sterling Motor Truck Co. has been reorganized

as follows: Ernest M. Sternberg, president, succeeding R. G. Hayssen, who remains a director; William G. Sternberg and Henry C. Keenan, vice-presidents; Oscar Held, treasurer and also secretary, succeeding Carl G. Hayssen in the latter capacity. The company's sales for year ended October, 1931, were \$5,166,000, compared with \$7,961,000 in the previous year.

★J. Lawson Wiggins has joined the Jesse R. Harlan Co., advertising agency, as vice-president, in charge of marketing.

★L. B. Manning, vice-president, Cord Corp., sees in increase of orders for Lycoming truck engines for January, a demand for trucks and a decided indication of general business improvement.

★S. G. Mitchell, with Federal Motor Truck since 1913, has been placed at the head of the advertising department as manager.

★James M. Cleary heads the S.P.A. Truck Corp., Studebaker subsidiary, as president through appointment by A. R. Erskine. Mr. Cleary was formerly vice-president of the truck corporation and domestic sales manager of Studebaker passenger cars.

★William E. Betts has joined Willys-Overland as sales promotion manager.

PROSPERITY NOTES

\$ Employment of the largest force of men since the company started is reported by E. J. Mohr, manager of Gunite Corp.

\$ Firestone Tire & Rubber Co. reports net profit for year ended Oct. 31 of \$6,028,631.

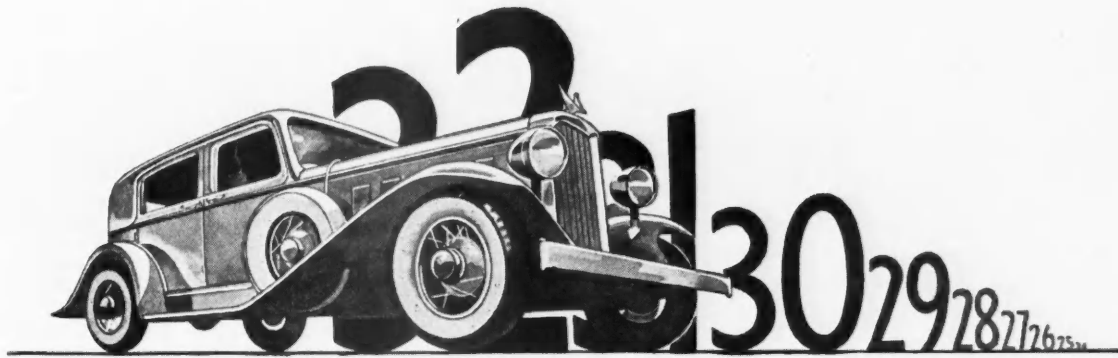
\$ An order of 162 trucks has just been received by the Autocar Co. from the Sanitary Commission of New York City. This is the second large order received from the commission by Autocar this year.

\$ Seiberling Rubber Co. reports net earnings of \$500,347 for year ended October, 1931. This compares with a net loss of \$1,282,098 for the same period last year.

\$ A gross profit of a half-million was rolled up by the India Tire & Rubber Co. in first 10 months of 1931, according to W. G. Klauss, president.

\$ Employment in the automotive industry in Michigan during November totaled 118,200 against 109,203 in October.

\$ The White Motor Co. has placed orders for 13,500,000 lb. of material for use in manufacturing 774 heavy duty trucks ordered by New York City.



On the CREST of the WAVE

Year after year Lockheed Hydraulic Brakes have delivered a quality of service that has won the admiration of a great army of motorists and operators of commercial vehicles.

Year after year certain manufacturers have used Hydraulics as a sensible, low-cost way of appealing to that public belief.

HYDRAULIC BRAKE COMPANY
DETROIT, MICHIGAN, U.S.A.

LOCKHEED HYDRAULIC

Four BRAKES *Wheel*

MORE AFFIDAVITS ON THE SPECIFICATIONS TUSSLE

CONTINUED FROM PAGE 17

For the \$486,000 available for flushers, White offered 150 at \$3,240; Autocar, 162 at \$2,998; General Motors, 131 at \$3,709.92; American-La France and Foamite, 118 at \$4,118.64; Diamond T, 90 at \$5,400; and Mack, 97 at \$5,010.30.

Specifications explained that the total load on the dump truck chassis, including the body, might at times exceed 10 tons, and that the flusher chassis must meet all requirements for that of the dump truck.

● Notables Submit Opinions ●

Since the last issue of *COMMERCIAL CAR JOURNAL*, the encyclopedia of expert opinions on manufactured vs. assembled trucks, which the two Brockway cases have caused to be collected, has been augmented by those of A. G. Herreschoff, chief truck engineer of Dodge Brothers Corp., and L. M. Viles, president of the Buda Company, on the side of the assemblers; and B. B. Bachman, vice-president and chief engineer of Autocar, three New York fleet operators, and Dr. William Schroeder, Jr., chairman of the New York City Sanitary Commission on the side of the manufacturers. Robert F. Black, president of Brockway; A. F. Masury, chief engineer of Mack; Arthur J. Scaife, consulting engineer of White; Elmer C. Goodwin, Department of Sanitation engineer, and Nelson C. Rosenbaum, of the city's legal staff, all of whom submitted affidavits in the motor broom case, presented additional material in new affidavits in the dump truck case.

Mr. Herreschoff of Dodge Brothers, after stating his company "manufactures and sells the fourth largest number of commercial cars of all companies of the world," listed the following items "usually purchased by all truck manufacturers," whether making the so-called "manufactured" or "assembled" type of truck:

Engine: crankshaft forging, connecting rod forgings, valves, valve springs, piston castings, piston rings, carburetor, air cleaner, fuel pumps, gaskets, distributor, spark plugs, wiring, tubing, fan belts, anti-friction bearing, generator, starter, clutch facing.

Transmission: gear forgings, anti-friction bearings, oil seals.

Propeller shaft complete: propeller shaft center bearing, propeller shaft center bearing oil seals.

Rear axle: ring gear forgings, all

anti-friction bearings, oil seals, brake lining.

Front axle: I-beam forging, all bearings, oil seals, brake linings.

Steering gear: purchased complete in many models.

Frame: frame side rail pressings, frame cross-member pressings.

Wheels: purchased complete.

Rims: purchased complete.

Tires and tubes: purchased complete.

Miscellaneous items purchased: steering wheel, lamps, instruments, radiator, radiator hose, muffler, ignition coils, road springs.

Mr. Herreschoff went on:

"The quality of the finished product is more dependent upon coordinated engineering than upon the geographical location of the manufacturers of the various major units."

Mr. Viles of the Buda Company, in describing how his company is equipped to cooperate with purchasers of assembled vehicles powered with Buda engines, pointed out that the company has authorized 37 service stations throughout the United States. Since 1922, he pointed out, the company has furnished engines for taxicabs in New York City, and there are now 10,000 cabs equipped with these engines on the streets of New York.

Mr. Masury, of Mack, covered much of the same ground as in his previous affidavit, and also said:

"The companies producing assembled vehicles usually gather together the respective units in some abandoned plant, and manufacturing, as they describe it, is accomplished by putting together these outside purchased parts by monkey wrenches and screw drivers. This, of course, calls for very little investment of capital and very little stability of any nature for the assembler to get started and the transient business life of such assembled truck manufacturers is the result."

● Cites Mortality Figures ●

"The history of the automotive industry indicates, from information gathered from the Thomas Register of American Manufacturers and current trade publications that of the assemblers who were in business in 1917, only 68 survived until the year 1922-23, indicating a mortality in a period of five years, of 31 per cent. Of the assemblers originally in business in 1917, who still remained in business in 1930 and 1931, the number dwindled to 43, indicating a mortality, within 13 years, of 56 per cent."

"In regard to the status of a manufacturer of a sub-assembly, such as a motor, it is often thought in a layman's mind that the motor is just one

motor on which the manufacturer can concentrate his efforts, and as an instance, I bring up the Continental Motor, where it is admitted that this is a good motor, and is put before the public as such. This particular concern got to manufacturing so many different kinds of motors, that they found it necessary to brand one as 'Red Seal' motor, in order to bring to the public's mind that this was the best motor they made. They have become practically less of a specialist in motor building and manufacture than the so-called truck manufacturer who usually has only three or four models in his factory at once."

● Scaife Adds to Views ●

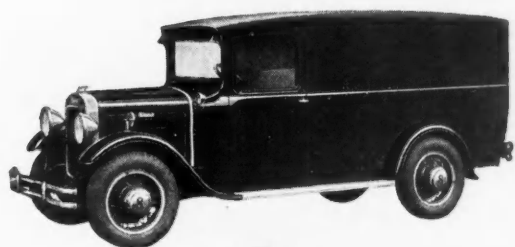
Mr. Scaife, of White, reviewed much of his previous material, and went on: "Reference has been made that the manufacturers of trucks do not make all of the various parts. It is true that they do not make the accessories such as tires, spark plugs, indicating mechanisms, gages, etc., but they do manufacture the principal units used in the power plant that have to do with propelling the vehicle."

Mr. Bachman, of Autocar, submitted: "The assembler plays a relatively small part in the manufacture of the truck. The main function performed is selling. As an indication of this, the comparison of the item of plant investment is informing." Mr. Bachman then contrasted the investment for plant of three manufacturers, \$39,104,092, with that of three assemblers, \$3,709,547.

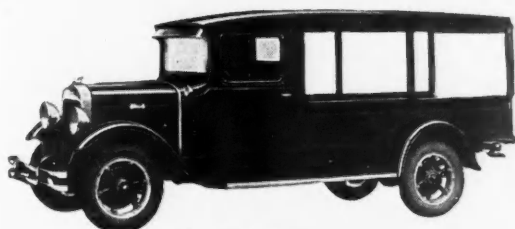
"The figures quoted," he continued, "are for the largest assemblers, but there are many concerns who use exactly the same units, who do not have any but the most meager equipment. In the truck field for heavy duty vehicles, the larger purchasers, with one possible exception, have bought and are continuing to buy the product of the truck manufacturer, although it is higher priced than that of the assembler."

Dr. William Schroeder, Jr., chairman of the Sanitary Commission: "It will be observed that an assembler bid on said opening, and that said assembler was higher on every one of the three items than any of the manufacturers who bid. This is ample evidence that the city of New York is obtaining, upon these specifications, trucks which are less in cost than that of the assembled class, to which plaintiff corporation belongs. The Department of Sanitation itself has at the present time 2400 motor vehicles, of the manufactured type, as compared with only 30 of the assembled type."

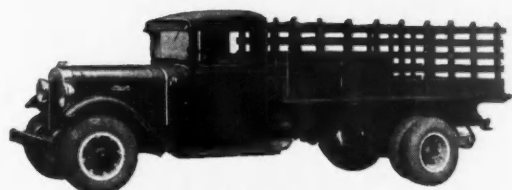
The 1932 Stewarts will Astound Truckdom



1 Ton



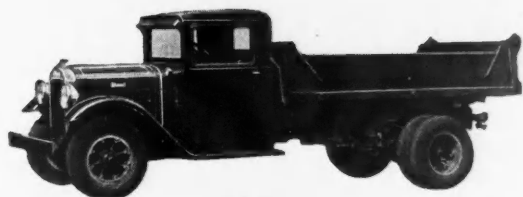
1 1/2 Ton



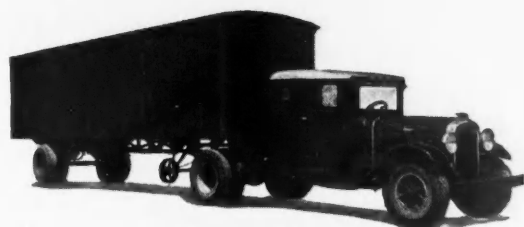
2 1/2 Ton



3 1/2 Ton



5 Ton



Tractor and Trailer

A Big Money Making Opportunity for Truck and Passenger Car Dealers

For 19 years Stewart has built quality trucks to sell at moderate prices—the new Stewarts surpass all previous achievements.

Handsome than ever in appearance—more rugged, more powerful—the 1932 Stewarts are marked by improvements in engineering principles and design that place them at the top of all truckdom.

See them at the New York Show and you'll realize why they will prove big profit producers for truck or passenger car dealers.

The amount of money necessary to handle the Stewart line is astoundingly small. Dealer discounts are extremely liberal.

Thousands of Stewarts are in use in 600 American cities and 86 foreign countries.

Thousands more will be sold in 1932. See the Stewart Exhibit. Examine Stewart improvements.

Write or wire for complete information, catalogs, prices and discounts.

15 Models—57 Wheelbases 1 to 7 Ton—
\$695 to \$6190—6 and 8 Cylinder Motors

Stewart

MOTOR TRUCKS

STEWART MOTOR CORPORATION
BUFFALO, N. Y.

See the Big Exhibit of 1932 Stewarts

New York Auto Show—January 9th to 16th
Buffalo Auto Show—January 16th to 23rd
Chicago Auto Show—Jan. 30th to Feb. 5th

See the New 8 Cylinder Models at the Show

DAIRY MEN IDOLIZE TRUCK REFRIGERATION

CONTINUED FROM PAGE 25

house-to-house delivery, but still more intriguing, is coddling it. Like adolescent swains, operators foregathered at every display in their enthusiasm to study each little detail and new feature promised by refrigeration.

Users of refrigerator equipment are no longer content with just a body. They accepted the utilitarian idea of cold transportation a few years ago. What they want today is more cold transportation but with greater operating efficiency. That manufacturers sensed this demand was plainly demonstrated. Exhibits gave evidence of better engineering and stressed such advantages as lower maintenance and operating cost, greater pay-loads on smaller chassis, automatic operation, thermostatic temperature control and appearance. These advantages have been made possible by lighter body construction; careful insulating; efficient use of refrigerants; improvements in design and reduced weight of mechanical refrigerating units; combinations of gasoline engines or power take-offs and house-current motors; larger lines of models to meet every capacity and service requirement, etc.

Besides a great advance in body design 1931 marked the introduction of two entirely new methods of indirect cooling by solid carbon dioxide, in one case by controlled radiation, in the other by condensing a gas.

● Controlled Radiation ●

The controlled radiation system of cooling was developed by Fitz Gibbon & Crisp, Trenton, N. J., and is known as Icefin Refrigeration. A cube of solid carbon dioxide is placed in an insulated reservoir built into the roof of the body. The under side of the reservoir is part of the ceiling of the refrigerator compartment. The ceiling, which is a plate of special conductor metal, carries heat from the compartment to the refrigerant. Since the heat is conducted only to the under surface of the refrigerant, as the four sides and top of the reservoir are insulated, the refrigerant evaporates down with a constant cross-section. Temperature is controlled by inserting one or more insulated pads underneath the cube. Decreasing or increasing the number of pads raises or lowers the temperature in the compartment. By locating the reservoir in the ceiling the loading space is free of any obstruction.

Arti-Matic is the name of the condensation system developed by the York Ice Machinery Corp., York, Pa., and incorporated in a York-Hoover refrigerator body. In this system solid carbon-dioxide is placed in a compact condensing compartment built in the upper right side of the body and entered from the outside. A refrigerating gas, methol chloride, is placed in a closed cycle flowing from the condensing compartment to the evaporator. Temperature can be maintained between 5 deg. and 40 deg. above by a control valve and thermostat accessibly located.

● New Refrigerating Units ●

Additional evidence indicative of the strengthened position and possibilities of refrigerated motor delivery, in the opinion of equipment manufacturers, are two new refrigerating units that appeared at the show for the first time this year and substantial rumors that another well-known producer will shortly enter the field with a special truck unit. The two new entrants are Kelvinator and Copeland. The unofficial rumor points to G-E. Frigidaire was well represented in its own booth as well as in the trucks of a number of other exhibitors, and the Servel unit was displayed in the Hercules body exhibit.

Available in various models and capacities, these units, operated electrically from power derived through a power take-off assembly or independent gasoline engine while on the road and by electric motor when garaged, incorporate many individual features of design as well as mounting and hook-up of drive. The Kelvinator, which has a speed control of power take-off, embodies the "floating power" idea. All units of the system are flexibly mounted so as to sway freely with the body and chassis. The Copeland unit is compactly assembled, all units, including gasoline engine and compressor, being housed in a case for mounting under one side of the body.

● Many Bodies Displayed ●

Practically every truck and body exhibitor had one or more models of mechanically refrigerated units on display. General Motors Truck showed one of its large chassis furnished with an ice-cream body equipped with a Frigidaire compressor driven by a Novo radiator-cooled, twin-cylinder engine supplied by independent fuel tank. Temperature in this job was controlled manually through thermometer on dash. Another model showed the refrigerating unit driven by a T&J Vari-Speed gen-

erator, which is powered from the truck engine by power take-off. This generator produces a constant voltage regardless of engine speed.

Batavia Body Co., Batavia, Ill., displayed a custom-built body of large capacity also equipped with a Frigidaire unit and T&J generator. In this unit, however, temperature is controlled manually by day and automatically by night. Any of its compartments may be cut out when not in use. Light weight with a corresponding reduction in weight is a feature.

By limiting the total weight of its mechanical equipment, which includes motor, gasoline engine, compressor, evaporator and accessories, to 500 lb. the Meyer Body Co., Buffalo, N. Y., mounted a 340-gal. ice-cream body on a 1½-ton chassis. Besides the usual controls, this unit also embodied a special switch to prevent both driving units, gasoline engine and motor, from being operated at the same time. All parts of the plant are removable as well as the evaporator coils, which only take up 3½ in. of head-room in the refrigerator compartment.

Included in the large line of refrigerator bodies displayed by Hercules Products, Evansville, Ind., was a 300-gal., two-compartment model equipped with a Servel mechanical refrigerating unit automatically operated by a motor and gasoline engine. Operation is controlled by a starting motor connected in series with a temperature control which automatically starts and stops the engine at predetermined high and low temperature limits. Gasoline is supplied by vacuum from the truck tanks.

● Other Firms Represented ●

The Autocar and White companies had large displays of their contribution to the ice-cream and dairy industries showing all the latest developments in refrigeration equipment in various body types and sizes as well as in methods of refrigeration. The following companies were also well represented with special jobs: American Car & Foundry Co., Anheuser-Busch, Inc., Consolidated Equipment Corp., Joseph Miller Co., John Guedelhoefer Wagon Co. and Wisner Mfg. Co. Attractive appearance characterized all the bodies, giving evidence of careful attention to such details as graceful lines, color effects, attractive fittings, Hansen hardware, etc.

The latest in house-to-house vehicles was to be seen at the show. Eight different makes were there. Two were electric drive, Walker and Ward; one gas-electric drive, Thorne; and five conventional gasoline engine drive, Divco, White, DeKalb, Ford and Twin Coach.

DRAMATIC PROOF

of the extraordinary reliability of the Ford Truck



ON A ROAD improvement project in the mountains of Kentucky, sand and gravel are taken from the river bed, and loaded into dump trucks. The trucks have to run in the river for some distance before reaching a 14% grade, up which they must pull, loaded, to the highway.

When the work started there was but one Ford in the contractor's fleet. That performed in such an extraordinary manner that more were ordered, and today out of twelve trucks in

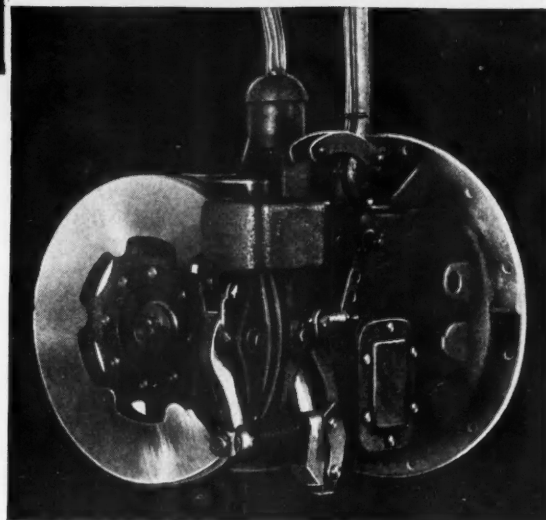
this service, nine are Fords. One of them at the end of six months had a repair bill of only fifteen cents.

Such conditions of service are most unusual, and the fact that the Ford truck can stand them triumphantly, and win the preference of the operator, is significant to every truck owner, in the cities as well as in the country. Let your Ford dealer demonstrate the Ford truck that will lower your hauling costs. In most principal cities there are centralized exhibits of these units.





**CAN YOU
STOP ?**



● Safe high speed operation demands a powerful reserve brake . . . an emergency brake that can be depended upon should service brakes prove inadequate for any reason . . . an emergency brake that will alone handle the load should service brakes fail entirely.

Truck and bus manufacturers realize this need more and more each year, due to higher speeds of all vehicles and greater road congestions. That is why leading makes of trucks and busses come equipped with Tru-Stop Emergency Brakes . . . why practically every other manufacturer includes Tru-Stop Brakes as optional equipment . . . and why every standard-make transmission has provisions for mounting Tru-Stop Brakes.

Specify Tru-Stop Emergency Brakes for your next trucks and busses.

AMERICAN CABLE COMPANY, Inc.

Automotive Division

BRIDGEPORT, CONNECTICUT

**3-111 General Motors Building
Detroit, Michigan**

An Associate
Company of
the American
Chain Com-
pany, Inc.



Two or four fan-shaped brake shoes compress against a forged steel air-ventilated disc.

The Tru-Stop Brake is self-equalizing. Natural lining wear is quickly and easily taken up. Re-lining is simply a matter of replacing the brake shoes. Adjustment or replacement, if necessary, can be made by any driver, any time.

TRU - STOP
A REAL EMERGENCY BRAKE

RELAY

NEW HEAVY DUTY MODELS

For 1932



WILL BE EXHIBITED
AT AMERICAN
ROAD BUILDERS
SHOW JAN. 11-15
DETROIT MICH.

NEW RELAY Models for 1932 offer even greater advantages in **POWER, TRACTION, FLEXIBILITY, and SHOCK-CUSHIONED CONSTRUCTION**; which is important to dependable and economical service in **ROAD BUILDING** operations.

Driven by more powerful engines, and transmitting the power to the wheels through a newly designed **FIFTEEN SPEED TRANSMISSION**, and the **RELAY SUSPENSION DRIVE**, these new **HEAVY DUTY RELAY TRUCKS** challenge the most severe tests.

The fundamental consideration in the design of the new RELAY Models 230 (5 ton) and 240 (7½ ton), has been to provide **SPEED and AMPLE POWER** with RELAY **ECONOMY and DRIVER COMFORT**, in **HEAVY DUTY UNITS**.

You are cordially invited to inspect these new Models at our Exhibit in Detroit, January 11-15, at the meeting of the American Road Builders Association. If you are unable to attend this exhibit, write us for detailed specifications on 1932 RELAY Models.

RELAY MOTORS CORPORATION

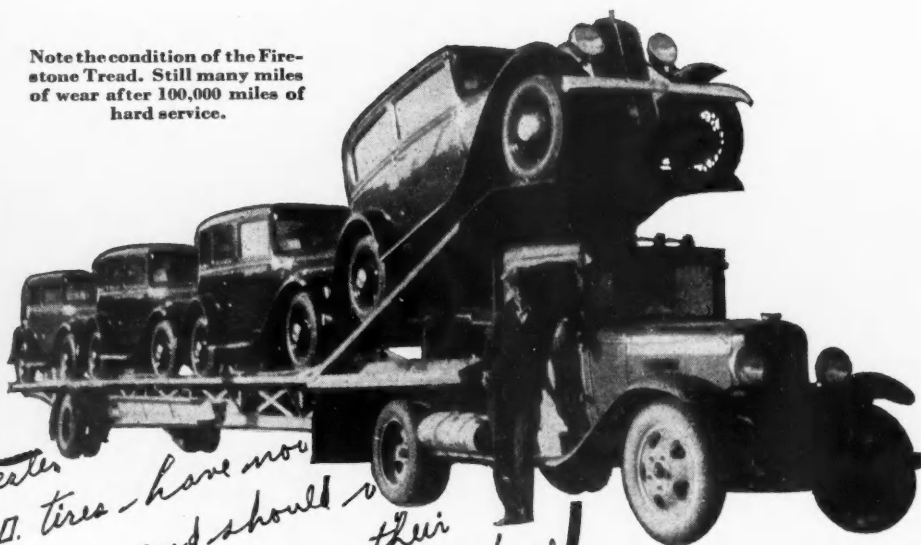
LIMA . . . OHIO

100,000 MILES!

and on the Original Air



Note the condition of the Firestone Tread. Still many miles of wear after 100,000 miles of hard service.



Feel you will be interested in 34x7 Firestone H.D. tires - have now approximately 100,000 miles and should run for at least 15,000 more judging from their present appearance. The tires on the trailer have the original air in them today.

LISTEN

to the **Voice of Firestone** Every Monday Night Over N. B. C. Nationwide Network.

LOOK at these tires. They've never been off the rims—still running on the original air. Their non-skid tread is not yet worn smooth . . . But actually they've gone 100,000 miles! And the owner, Fred L. Putnam, of Antwerp, Ohio, says they look good for 15,000 more.

Every day brings us new records of Firestone Tire mileage—records that mean real economy to countless truck owners. YOU can enjoy that same economy, too, by equipping your trucks with Firestone Gum-Dipped Tires, backed by Firestone Service. Talk with your nearby Firestone Dealer. He'll show you in a few minutes how Firestone Tires will save you actual cash—as well as costly delays.

Firestone

GUM-DIPPED TIRES

BATTERIES « « RIMS « « BRAKE LINING « « SPARK PLUGS « « ACCESSORIES

Copyright, 1931, The Firestone Tire & Rubber Co.

January, 1932

The Commercial Car Journal

SHOW ME THE FLEET OPERATOR WHO ISN'T INTERESTED IN RESULTS LIKE THESE . . .

53 trucks
in this fleet
every one
Whirlgas-
equipped

72
gallons
of gasoline
saved daily

Cheapest gas
gives
unexcelled service

Greatly improved
motor operation

A yearly saving
of \$2000

PHONES R. O. 4203
LONGFELLOW 9191

"SELECTION FROM BAKERY AT YOUR DOOR"
**the SERV-RITE
BAKER**
BOETTGER BAKING CO
420 E. NEW HAMPSHIRE AVE.
PLEASANT RIDGE MICH.

Aug. 25, 1931

Whirlgas Sales Co.
Detroit, Mich.

Gentlemen:

Some months ago, after an excellent test, we equipped our entire fleet of 53 trucks, together with official and employee's cars with the Whirlgas carburetor mixer. A complete daily record is kept of all expenses of fleet operation. From this we find that the saving in gasoline consumption since Whirlgas installation amounts to 72 gallons daily.

Previous to installing Whirlgas we had been using Benzol, but with the advent of Whirlgas we find that the cheapest of gasoline gives unexcelled performance.

This saving to us in gasoline alone will amount to over \$2,000 per annum, in addition to which we have greatly improved motor operation.

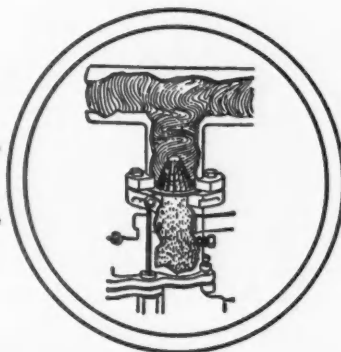
Very truly yours

T. A. Blackwell

WHIRLGAS gives a cyclonic turbulency to the mixture passing from the carburetor to the engine, breaking it into a fog, thereby raising the value of the explosive action and adding to the efficiency of the engine. A ready-made 1932 operation economy for you. Write for literature and quantity discounts.

WHIRLGAS SALES COMPANY

7237 East Jefferson Ave.



Detroit, Michigan

Published in the interests of those who manufacture, sell or use motor trucks and dumping equipment.

The WOOD

BRANCHES AND DISTRIBUTORS
IN PRINCIPAL CITIES

WOOD HYDRAULIC

VOL. VI

JANUARY

Cincinnati Standardizes on WOOD Equipment—



Cincinnati's new Waste Collection fleet. Wood bodies and hoists mounted on GMC chassis.

WHEN you decide your old shoes have served their last step and you throw them in the ash can along with last week's papers and the broken alarm clock, you are contributing to a problem that causes much concern to city officials.

To maintain public health and civic appearance, a city's rubbish must be collected and disposed of in as rapid and unobtrusive a manner as possible.

Mr. William Ellis, in charge of Cincinnati's Waste Collection Department, this year developed a system which is attracting wide interest among municipalities.

With \$205,000 to spend for necessary equipment, Mr. Ellis framed a plan involving the use of a fleet of dump trucks equipped with Wood hoists and bodies, built to his own design. So efficiently have they been serving, according to Mr. Ellis, that they have been adopted as standard by the city.

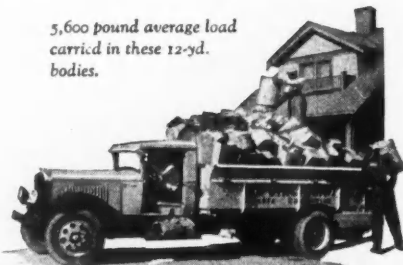
Special requisites for waste collection equipment are speed and appearance. From pick-up points to any of Cincinnati's three incinerators means a haul of from 3 to 6 miles through city streets. Each truck, according

to Mr. Ellis, will average 35 miles per day. It is vitally necessary to clip minutes and just as important that townspeople be not offended by repulsive, unsanitary carriers.

The Wood bodies, trim and white-painted to begin with, are cleaned with hot steam under pressure each afternoon. Bacteria are thereby destroyed, and objectionable odors

and stains eliminated. On Cincinnati's streets they present an appearance fully matching that of any commercial vehicle. Drivers are given permanent assignments to certain trucks and are held personally re-

5,600 pound average load carried in these 12-yd. bodies.



Three more Cincinnati units. Wood 3 cu. yd. bodies and hoists on Studebaker chassis.

HOISTER

HOIST & BODY CO...DETROIT

1932

NO. 1



Fountain Square,
Cincinnati

Special Rubbish Dump Body

The 5 cu. yd. body pictured below, has stirred up interest among a group of contract haulers engaged in rubbish collection for the city of Detroit. Several orders have already been filled and inquiries are coming in from many outside points.

The equipment is built for 1½ ton chassis and consists of a steel body equipped with hinged wooden extension sides and wooden tail-gate. The latter swings to either side, leaving the rear end open, which speeds up dumping time, particularly where light, bulky loads are handled.

Dimensions of body shown are 8' x 6' x 33½". A good dumping angle is provided with the Wood D6 hoist.



sponsible for the truck's condition at all times.

Special body features, recommended by Mr. Ellis, make for extremely efficient performance. All bodies are mounted low on the truck chassis, and the larger-sized ones have flared, hinged sides—to effect easy, rapid manual loading. "D" rings are spotted two feet apart on all sides, for attaching tarpaulin sheets over the loads.

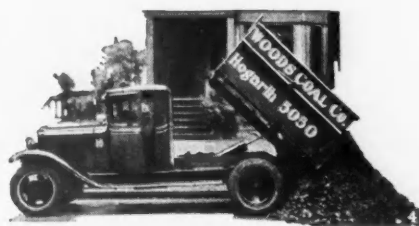
Two sizes are used, according to the density of the population in the areas they serve. The larger, measuring 12 feet by 7 feet by 30 inches, are mounted over F4 hoists on GMC chassis. The designed capacity is 12 cubic yards and the usual load, according to Mr. Ellis is 14 yards of about 400 pounds per yard.

Smaller bodies, measuring 8 feet by 6 feet by 20 inches, are mounted with F1C hoists on Studebaker chassis.



Mr. William Ellis, head of Cincinnati Waste
Collection Department.

The New D6 Scores Heavy Sales



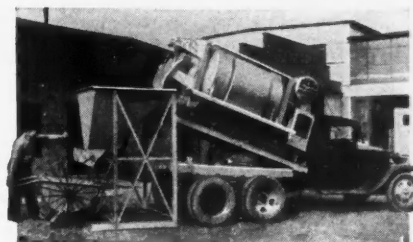
D6 hoist with C6—75 cu. ft. coal body and 45 cu. ft. top
box, on a Chevrolet. Capacity 2 tons coke, 3 tons coal.

From all types of users and from all sections of the country orders are being reported for the new D6 hoist—the heavy duty unit for 1½ ton chassis.

Massive hinges, shafts and piston, a six-inch cylinder bore, full size oil pump all spell ability to safely handle loads far exceeding the rated capacity of the chassis for which it is intended.



A 2 cu. yd. Jaeger mixer mounted over a Wood F4C
hoist, on an International Harvester truck. Wide distri-
bution of mix is permitted with mixer raised from 33°
to 35° above normal position.



A 1½ cu. yd. Jaeger and an F2C Wood hoist, on a Ford
truck. Discharging into ground hopper.

Rear End Lift Chutes Concrete

Products of two industrial pioneers are being united at Columbus, Ohio.

At its introduction, the Jaeger truck mixer, like the Wood hydraulic hoist which preceded it some 15 years, represented not only a new product but a new idea.

Now the courses merge and we have Wood underbody hoists adopted for mounting with Jaeger truck mixer and agitators.

An 8 foot elevation of the discharge end is accomplished. This increases the spouting area by 75%, allowing full width coverage of alleys, road shoulders and parkways.

Foundations or other forms can be reached from distances beyond the accessibility of ordinary truck mixers. Also discharge can be made into ground hoppers, which eliminates truck delay at the job.

H. J. Reynolds, manager of Truck Engineering Corporation, Wood's Columbus dealers, supervised the first Jaeger-Wood installations.

The Jaeger-Wood combination can be mounted on any standard type of truck equipped with power take-off opening.

La Benne Wood will serve France

Production begins this month in the new Wood factory, La Benne Wood, erected at Puteaux, Seine, France. Mr. Paul Bernard, who has represented Wood equipment abroad for many years, is General Manager of the new organization. Wood's complete line of hoist and dump body equipment will be manufactured.



1932 *will not be here again!*

BUSINESS WILL BE WHAT YOU MAKE IT

A new dawn breaks across the horizon. The long, bright shafts of the early morning of Nineteen Thirty-Two pierce the gray unprepossessing sky of yesterday's year.

Ahead of us is a new situation...a new outlook on business...a future great in expectancy.

For more than a full-rounded quarter of a century Raybestos of Bridgeport has faced the unturned page of each New Year's calendar firm in the conviction that its business virtue would be amply rewarded. As each succeeding year has given way to the new, our records have disclosed a broadening of our friendship in many quarters and a widening of our service unto many lands and to many people.

Our policy, throughout this long epoch, has been simple and direct. We have steadfastly adhered to the undeviating principle of always making our product as good as human minds and hands, coupled with scientific research, could enable us to do so.

Today, on every hand, the name "Raybestos" is everywhere given as the understandable synonym for high-grade brake linings.

To have arrived at such a position is not the result of an untoward accident, nor is it by the chance or machination of some fortunate circumstance. Rather it is this unrelent-

ing policy of always making the highest character of product which has given Raybestos this leadership.

Through all the contested years, in all businesses, quality has ever remained triumphant. There is no reason to believe that there will now be a recession. These last few years have been filled with the idea of substitution and succumbing to inferior products in the vain belief that they might prove to be more economical.

Raybestos brake-linings may cost more than others. But to you, a commercial car operator, comes the satisfaction of knowing that you have installed the best of product and that insistence on Raybestos is invariably the greatest form of economy.

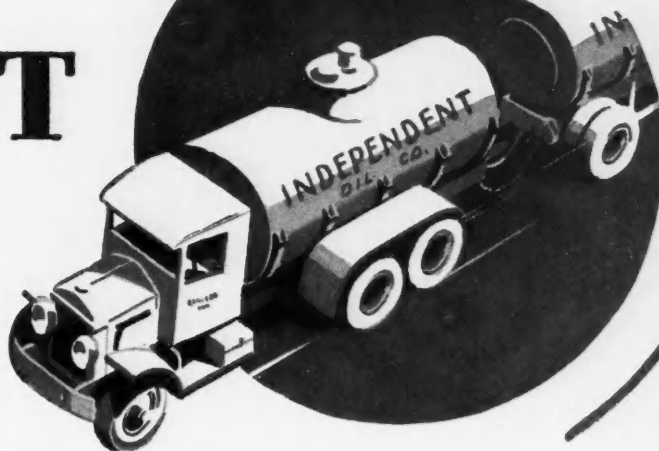
Our plans for this momentous year of 1932 include a most modern and instructive talking moving picture. It will give you a clear and fully understandable reason why Raybestos holds the position of eminence.

Bookings are now being made for this unusual picture...we will be pleased to inform you of the dates of showings in your territory.

Write us this simple message, "Please tell me about Raybestos." We will quickly respond.

THE RAYBESTOS DIVISION
of Raybestos-Manhattan, Inc.
Bridgeport, Connecticut

WHAT ABOUT TRAILER BRAKES?



Brake-less trailers are rapidly being legislated out of existence—where they have not been forced out by sheer weight of economic common sense.

Your problem as a trailer operator immediately becomes clear cut—

How can I save from the scrap-pile my fleet of trailers which are an important source of income, and which are in good physical condition, except that they have no brakes?

This vital question has been answered for you.

Five strong companies — their names spell BRAKE HEADQUARTERS — have pooled their immense engineering resources and their unsurpassed fund of practical field experience; and have focused these facilities on solving this acute problem.

This practical solution and how you may avail yourself of it are set forth in the following pages.



BENDIX BRAKE COMPANY
BENDIX-WESTINGHOUSE AUTOMOTIVE AIR BRAKE COMPANY
BRAGG-KLIESRATH CORPORATION
HYDRAULIC BRAKE COMPANY
THE TIMKEN-DETROIT AXLE COMPANY



OOD brakes are an *engineering* job. They are also an *axle* job. And trailer brakes are specifically a *power-brake* job.

These facts considered, there is one way only by which a good, properly engineered braking system can be put on a trailer — and that is by *changing the axles*; by putting under that trailer an axle or set of axles fully equipped with correct brakes.

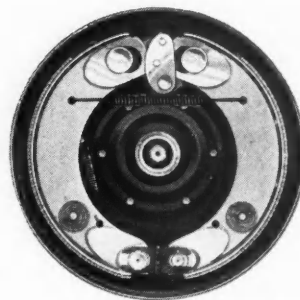
Such axles can now be had; a complete line—Timken Trailer Axles.

It is not "Can I afford to do this?" but "How can I afford *not* to?"

Timken Trailer Axles are offered at prices which make it wholly practicable and economically advisable to convert your present brake-less trailers into modern, fully equipped transport units, answering every legal requirement. These axles are also readily obtainable on new trailers, by specifying them.

Timken Trailer Axles are built for all sizes and types of trailers. They are *good* axles—the kind you expect of Timken. Axle centers are properly designed to withstand braking torque. Spindles and bearing seats are held to closest limits — precision jobs. Effective oil

seals retain hub lubricants; and oil-deflectors prevent excess lubricant from reaching the brakes.



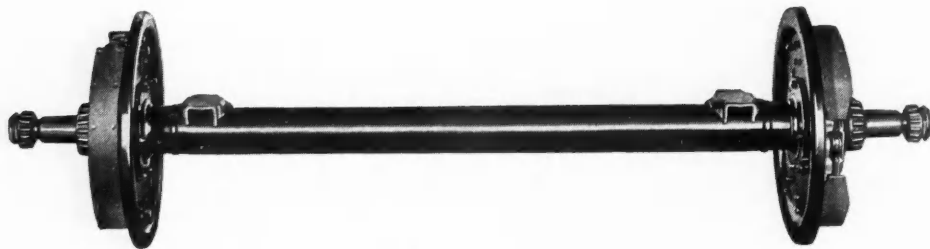
Bendix Duo-Service Brake

Brake equipment is of any type desired: Bendix Brakes with cable and conduit controls; Lockheed

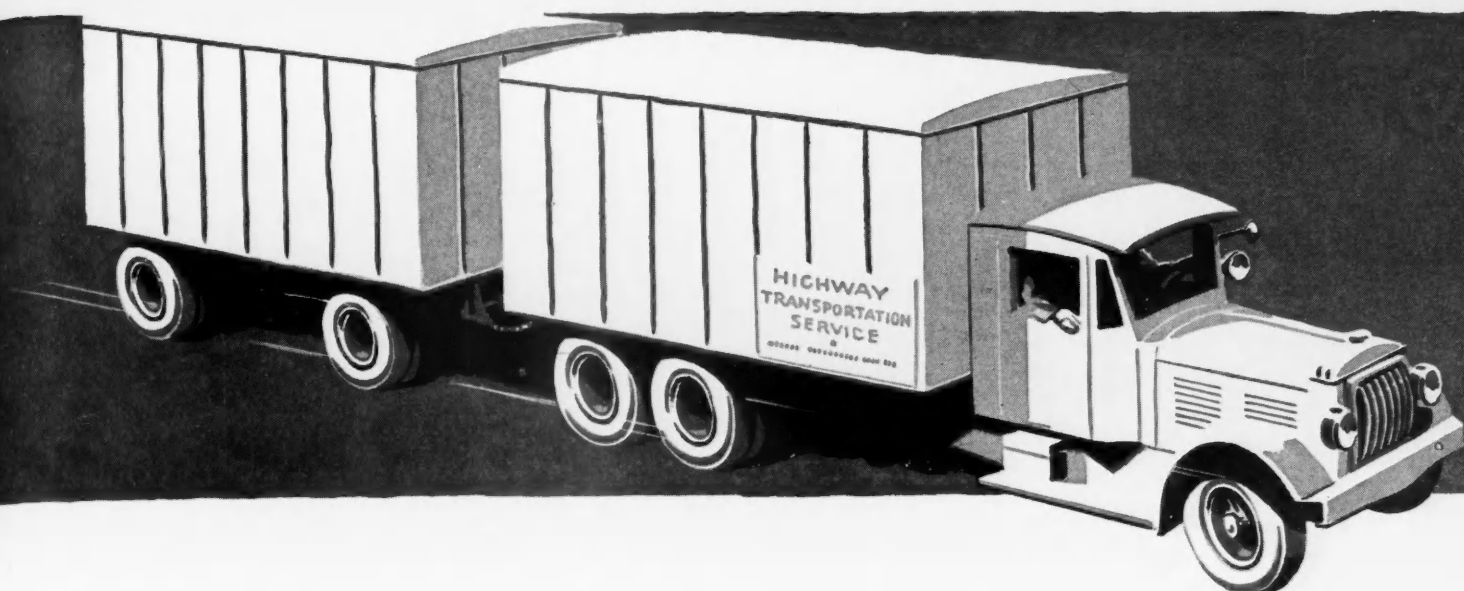
Hydraulic Brakes; or Timken Brakes. Power application is optional — Bendix-Westinghouse Air Brakes and Controls; or B-K Vacuum Power Brakes.

Correct field installation

The interest of the strong companies cooperating in this announcement is obvious — to *insure correct field installation of brakes on trailers now in service*; and to make such conversion simple and economical.



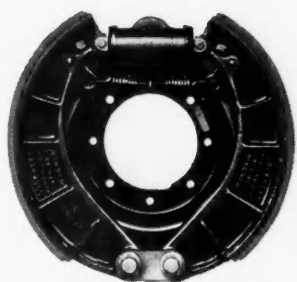
Timken Trailer Axle with Lockheed Hydraulic Brake, ventilated type {left} and Bendix Duo-Service Brake {right}



You are definitely assured of correctly engineered brakes; as opposed to the uncertainties, the *probabilities* of inaccuracies and failures which must be inherent in any "blacksmith-shop" methods and attempts to install power brakes.

Controlled distribution

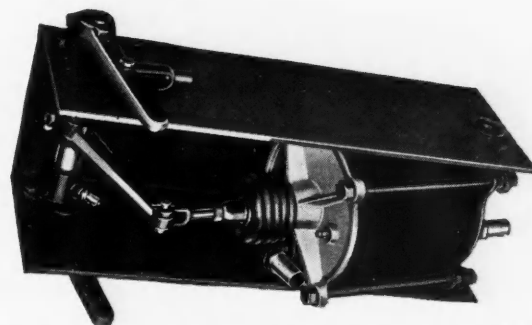
Timken Trailer Axles for field installation will be distributed solely by the authorized distributors of Bendix-Westinghouse Automotive Air Brake Company and Bragg-Kliesrath Corporation. This policy was decided upon as a means of protecting trailer operators;



Lockheed Hydraulic Brake ventilated type

to guarantee that brakes shall be correctly installed and "engineered to the job." Bendix-Westinghouse and Bragg-Kliesrath offer the services of their regular corps of field engineers—to survey your fleet; act as your brake consultants; and see to it that your conversion program will meet the most rigid performance requirements of actual operation. You are in this way assured of power brake installations which are technically and mechanically correct.

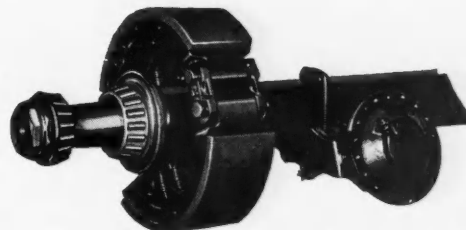
If you specify B-K equipment you may know that you will enjoy all the benefits of simplified and instant remote control.



B-K Vacuum Cylinder trailer unit, "on" position

If you specify Bendix-Westinghouse you get all the advantages of modern air brakes and controls, and the emergency features of train operation.

For immediate action consult the nearest distributor, as listed on the following page; or write for information to either of these two companies:



Bendix-Westinghouse Air Brake trailer unit, showing air chamber and slack adjusters

**BENDIX - WESTINGHOUSE AUTOMOTIVE
AIR BRAKE CO.,**

5001 Center Ave., Pittsburgh, Pa.

BRAGG-KLIESRATH CORPORATION,

401 Bendix Drive, South Bend, Ind.

COMMERCIAL CAR JOURNAL

TABLE OF TRUCK SPECIFICATIONS

Corrected Each Month From Data

Supplied Direct by Manufacturers

(KEY TO REFERENCES ON PAGE 80)

Tractor Trucks

Make, Model and Capacity	General			Gear Set		Rear Axle		For Corresponding Truck Model, See Specifications Under Tonnage Noted		General			Gear Set		Rear Axle		For Corresponding Truck Model, See Specifications Under Tonnage Noted				
	Chassis Price	Standard W.B.	Gross Vehicle Wt. See Key Note	Chassis Wt. Stripped	Make and Model	Location	No. of Forward Speeds			Aux. Locat. and Speeds	Gear Ratios	Chassis Price	Standard W.B.	Gross Vehicle Wt. See Key Note	Chassis Wt. Stripped	Make and Model		Location	No. of Forward Speeds	Aux. Locat. and Speeds	Gear Ratios
A.C.F. TT175A	155	75000	11000	BL714703	U	12	Op	7.48	101	T-175A											
A.C.F. TT175B	155	60000	10250	BL714703	U	12	Op	7.46	101	T-175B											
A.C.F. TT160	155	60000	9700	BL714703	U	12	Op	7.46	135	T-160											
Autocar DT	3500	140	20000	5300	Own T	U	4	No	6.27	33.5	D-2	2 1/2									
Autocar SHST	4800	104	40000	7900	Own T	U	4	No	10.4	66.6	SHS	3 1/2									
Autocar SCHST	4800	145	40000	8200	Own T	U	4	A	10.4	66.6	SCHS	3 1/2									
Autocar FT	5800	154	60000	11000	B-L 70	U	4	A	11.66	109	F	5 1/2									
Brookway 90	137	15750	3850	B-L	U	4	A	No	5.83	37.3	90	1 1/2									
Brookway 140	138	24500	5900	B-L	U	4	A	No	6.6	35.3	140	2 1/2									
Brookway 170	138	29750	6800	B-L	U	4	A	No	16.4	46.6	170	3									
Brookway 195	138	34125	7900	B-L	U	4	A	No	6.8	49.5	195	4									
Brookway 220	138	38500	8200	B-L	U	4	A	No	6.96	50.7	220	5									
Brookway 250	146	43750	10000	B-L	U	4	A	No	8.75	63.7	250	5 1/2									
Brookway 290	159	52500	10750	B-L	U	4	A	No	10.1	95.0	290	5 1/2									
Chicago I-76-D	301	159	8740	B-L 60 Max	U	7	A	No	7	77.2											
Condor CB	118	118	3875	Cov A-4 J	U	4	A	No													
Condor CC	122	122	4820	Cov W4J	U	4	A	No													
Condor CD	122	122	5020	Cov W4J	U	4	A	No													
Condor CF	118	118	5200	Cov Rus	U	4	A	No													
Condor CGW	153	153	5950	Cov Rus	U	4	A	No	6.3	41.0											
Corbitt 9B6T	139	18000	4200	BL-214	U	4	A	No	6.8	43.6											
Corbitt 10B6T	136	16000	3950	BL-214	U	4	A	No	6.38	40.9											
Corbitt 12B6T	152	20000	4955	BL-51	U	4	A	No	7.40	48.8											
Corbitt 15B6T	157	25000	5980	B-L 51-5	U	5	A	No	7.80	46.5											
Corbitt 18D6T	159	30000	7600	BL-615	U	5	A	No	7.33	48.0											
Corbitt 24D6T	165	40000	9200	BL-70	U	7	A	No	8.15	76.6											
Diamond T 216B	795	135	3300	War	U	4	A	No	Opt	Opt	216B	1 1/2									
Diamond T 316	1220	137	20000	4400	War	U	4	A	No	Opt	Opt	316	2 1/2								
Diamond T 303F	1755	137	24000	4800	Cov	U	4	A	No	Opt	Opt	303F	2 1/2								
Diamond T 551B	2310	131	27000	5600	Cov	U	4	A	No	Opt	Opt	551B	3								
Diamond T 504A	2710	135	6200	Cov	U	4	A	No	Opt	Opt	504A	3									
Diamond T 603	3360	147	7300	Cov	U	5	A	No	Opt	Opt	603	4									
Diamond T 750	4730	147	8300	Cov	U	5	A	No	Opt	Opt	750	5									
Dodge Bros. F40	1995	150	14590	5173	Own	U	4	A	No	6.37	43.7	F-40	2								
Dodge Bros. F60	2845	146	18979	5543	Own	U	4	A	No	8.26	56.6	F-60	2 1/2								
(1) Dodge Bros. UF30, F30, F35			25000	5050	Own	A	4	A	No	8.75	52.9	A6TW	2 1/2								
Federal A6TW	2360	140	32000	6495	Own	A	4	A	No	8.75	57.1	T10W	3								
Federal T10W	2915	143	32000	6495	Own	A	4	A	No	8.75	57.1	T10W	3								
Federal U6	3860	143	43000	7155	B-L 60	A	7	A	No	8.5	80.8	U6	3 1/2								
Federal C7	4485	153	50000	9185	B-L 60	A	7	A	No	9.98	94.8	C7	5								
Federal C8	4895	153	50000	9285	B-L 60	A	7	A	No	9.98	94.8	C8	5								
Federal X8	5085	155	65000	9660	B-L 60	A	7	A	No	11.7	110	X8	5 1/2								
Federal X8R	5810	155	65000	10585	B-L 60	A	7	A	No	11.7	110	X8R	5 1/2								
(1) Federal D2, E2, F7, A6, A6T, T3W, T8WF, T10B			2920	Own	U	4	A	No	5.43	35.7											
(X) Gen. Mot. T-18	620	131	3440	Own	U	4	A	No	6.6	43.4											
(X) Gen. Mot. T-19	925	141	3765	Own	U	4	A	No	6.8	34.5											
(X) Gen. Mot. T-25	1405	141	3940	Own	U	4	A	No	6.60	33.5											
(X) Gen. Mot. T-26	1510	141	4705	Own	U	4	A	No	6.43	32.7											
(X) Gen. Mot. T-30	1700	141	4695	Own	U	4	A	No	6.43	40.5											
(X) Gen. Mot. T-31	1845	141	4725	Own	U	4	A	No	7.14	36.2											
(X) Gen. Mot. T-42	1845	141	5095	Own	U	4	A	No	9.45	48.0											
(X) Gen. Mot. T-44	2065	141	5235	Own	U	4	A	No	9.45	59.9											
(X) Gen. Mot. T-45	2095	141	6390	Own	U	4	A	No	9.45	58.4											
(X) Gen. Mot. T-55	2750	155	7150	Own	U	4	A	No	10.7	65.9											
(X) Gen. Mot. T-60	3250	154	7045	Own	U	4	A	No	10.7	65.9											
(X) Gen. Mot. T-61	3525	154	7735	Own	U	12	A	No	12.3	171											
(X) Gen. Mot. T-82	3970	155	7815	Own	U	12	A	No	12.3	171											
(X) Gen. Mot. T-83	4109	155	10885	Own	U	12	A	No	10.3	144											
(X) Gen. Mot. T-85	5775	171	9775	Own	U	12	A	No	9.25	58.0											
(X) Gen. Mot. T-90	5455	185	13140	Own	U	4	A	No	9.11	57.1											
(X) Gen. Mot. T-95	7860	189	3100	War T9	U	4	A	No	5.8	36.3	AX4	1									
(X) Gen. Mot. T-96	7325	189	3300	War T9	U	4	A	No	5.8	36.3	AX6	1									
Gramm AX4	2-3	131	3100	War T9	U	4	A	No	6.2	39.6	BX4	1 1/2									
Gramm AX6	2-3	131	3275	War T9	U	4	A	No	6.2	39.6	BX6	1 1/2									
Gramm BX4	3-4	131	3300	War T9	U	4	A	No	5.8	36.3	CX4	2									
Gramm BX6	3-4	131	3475	War T9	U	4	A	No	5.8	36.3	CX6	2									
Gramm CX4	4-6	131	3700	War T9	U	4	A	No	5.8	36.3	CX4	2									
Gramm CX6	4-6	131	3900	War T9	U	4	A	No	5.8	36.3	CX6	2									
Gramm B	3-5	115	4025	Cov A4J	U	4	A	No	5.8	38.4	B	1 1/2									
Gramm C	4-6	122	4700	Cov W4J	U	4	A	No	5.8	37.1	C	2									
Gramm D	5-8	122	5100	Cov W4J	U	4	A	No	6.1	39.0	D	2 1/2									
Gramm E	6-9	122	5800	Cov Rus	U	4	A	No	5.77	37.8	E	3									
Gramm G	8-12	160	7950	B-L	U	4	A	No	6.8	49.5	G	4									
Gramm GW	10-15	157	8925	B-L	U	4	A	No	6.3	45.3	GW	5									
Hug	98	Op		B-L714,703	U	12	A3	No	10.26	139	98-6	6W									
Indiana 89	137	15750	3850	B-L	U	4	A	No	5.12	20.9	89	1 1/2									
Indiana 140	138	24500	5900	B-L	U	4	A	No	6.16	35.3	140	2 1/2									
Indiana 170	138	29750	6800	B-L	U	4	A	No	8.41	46.6	170	3									
Indiana 195	138	34125	7900	B-L	U	4	A	No	6.8	49.5	195	4									
Indiana 220	138	38500	8200	B-L	U	4	A	No	6.96	50.7	220	5									
Indiana 250	146	43750	10000	B-L	U	4	A	No	8.15	63.7	250	5 1/2									
Indiana 290	146	52500	10750	B-L	U	4	A	No	10.09	95.0	290	5 1/2									
International A-1	138	24500	5900	B-L	U	4	A	No	6.16	35.3	A-1	2 1/2									
International A-2	138	29750	6800	B-L	U	4	A	No	8.41	46.6	A-2	3									
International A-3	138	34125	7900	B-L	U	4	A	No	6.8	49.5	A-3	4									
International A-4	138	38500	8200	B-L	U	4	A	No	6.96	50.7	A-4	5									
International A-5	146	43750	10000	B-L	U	4	A	No	8.15	63.7	A-5	5 1/2									
International A-6	146	52500	10750	B-L	U	4	A	No	10.09	95.0	A-6	5 1/2									
International A-7	146	52500	10750	B-L	U	4	A	No	10.09	95.0	A-7	5 1/2									
International A-8	146	525																			

(1) Models available as tractor trucks.

MORE changes in factory offerings appear in specifications this month than for a long time. Last month but seven truck models were added to the tables, this month there are 38. Fifty models have been dropped from the list this month, also a most unusual number.

Kenworth presents a new line entirely replacing the former listings. Models are shown in the 2, 2 1/2, 3, 3 1/2, 4, 5 and 5 1/2 and more classifications as well as six-wheelers. Other new models include:

GMT: T-18 1 and 1 1/4 ton.

International: A-1 1500 lb.; A-3 1 1/2-ton; A-7, A-8 5-ton and A-3, A-7 and A-8 as tractor trucks.

La France-Republic: H3 4-ton; M3 5-ton; 35-3 5 1/2-ton and more.

Stewart: 50X 2-ton; 58-8 2 1/2-ton.

Line Number	Make, Model and Capacity	General			Tire Size		Make and Model	Engine										Fuel System	Electrical System		Line Number					
		Chassis Price	Standard W.B.	Max. W.R. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)		Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make
1000 Pounds																										
1	Chevrolet... Ind. Com.	355	109	109	4000	1880	B 4.75/19	B 4.75/19	Own	6-3 1/2 x 3 1/2	194.0	26.3	50-2600	H	G	C	2 1/2	6 1/2	3	PC	No	Car	V	D-R	D-R	1
2	Dodge Bros... UF-10	375	109	109	4025	1925	B 5.00/19	B 5.00/19	Own	6-3 1/2 x 3 1/2	196	21.0	48-2800	L	G	C	2 1/2	6 1/2	3	FP	No	Car	V	D-R	D-R	2
3	Dodge Bros... F-10	445	109	109	4125	1975	B 5.25/19	B 5.25/19	Own	6-3 1/2 x 3 1/2	211.5	25.3	66-3200	L	L	C	2 1/2	6 1/2	4	FP	No	Car	V	D-R	D-R	3
4	Fargo Packet	595	103	103	4000	1935	B 5.00/19	B 5.00/19	Own	6-3 1/2 x 3 1/2	189.8	23.4	40-2200	L	G	C	2 1/2	6 1/2	3	PC	No	Car	V	D-R	D-R	4
5	Ford... T-15	340	121	114	6500	1675	B 4.75/19	B 4.50/20	Own A	4-3 1/2 x 3 1/2	100.5	24.0	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Mar	M	D-R	D-R	5
6	(X) Gen. Mot... T-15	595	114	114	6500	2330	B 5.25/19	B 5.25/19	Own 200	6-3 1/2 x 3 1/2	221	21.3	70-3200	L	C	C	2 1/2	6 1/2	4	CC	No	Mar	M	D-R	D-R	6
7	Studebaker... S-1	395	113	113	4000	1923	B 5.00/19	B 5.00/19	Own	6-3 1/2 x 3 1/2	193.0	25.3	65-3400	L	C	C	2 1/2	6 1/2	4	CC	No	Str	Til	M	D-R	7
8	Willis Six... C-113	395	113	113	4000	1923	B 5.00/19	B 5.00/19	Own C-113	6-3 1/2 x 3 1/2	193.0	25.3	65-3400	L	C	C	2 1/2	6 1/2	4	CC	No	Str	Til	M	D-R	8
1500 Pounds																										
9	Dodge Brothers	490	124	124	4760	2260	B 6.00/20	B 6.00/20	Own	4-3 1/2 x 4 1/2	196	21.0	48-2800	L	G	C	2 1/2	6 1/2	3	PC	No	Car	V	D-R	D-R	9
10	Dodge Brothers	595	124	124	4860	2360	B 6.00/20	B 6.00/20	Own	6-3 1/2 x 4 1/2	208.0	27.3	63-3200	L	L	C	2 1/2	10 1/2	7	FP	No	Str	V	N-E	N-E	10
11	Fargo Clipper	725	125	125	6000	2340	B 5.50/18	B 5.50/18	Own	6-3 1/2 x 4 1/2	195.6	23.4	48-2800	L	C	C	2 1/2	6 1/2	3	FP	No	Str	V	N-E	N-E	11
12	Fisher-Std. JR-BX	645	130	141	6800	2625	P 30x5	P 30x5	Con W10	4-3 1/2 x 4 1/2	200.5	24.0	48-2800	L	C	C	2 1/2	6 1/2	3	CC	No	Str	M	A-L	A-L	12
13	(X) Gen. Mot. T-15	645	130	141	6500	2625	B 5.50/20	B 5.50/20	Own 200	6-3 1/2 x 4 1/2	200.3	26.3	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Str	M	D-R	D-R	13
14	International... A-1	615	136	160	6500	2865	B 5.50/20	B 5.50/20	Wau XAH	4-3 1/2 x 4 1/2	186	21	39-2400	L	C	C	2 1/2	6 1/2	3	PC	No	Str	V	D-R	D-R	14
15	Relay... 15AA	1370	131	131	6500	3750	P 30x5	P 30x5	Con 17E	6-3 1/2 x 4 1/2	214.7	27.3	52-2200	L	C	C	2 1/2	9 1/2	7	PC	No	Str	V	A-L	A-L	15
1 Ton																										
16	Atterbury... A	132	145	145	7000	3400	P 30x5	P 30x5	Lyc WTG	6-3 1/2 x 4 1/2	201.4	21.6	64-2800	L	C	C	2 1/2	8 1/2	4	CC	No	Zen	V	D-R	D-R	16
17	Commerce... S-11	1600	142	162	7000	3900	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	53-2200	L	C	C	2 1/2	8 1/2	4	CC	No	Zen	V	A-L	A-L	17
18	Condor... CAV-6	825	131	180	8000	3550	B 6.00/20	B 6.50/20	Con 25A	6-3 1/2 x 4 1/2	214	27.3	61-3000	L	C	C	2 1/2	6 1/2	4	FP	No	Til	M	A-L	A-L	18
19	(T) Day Elder... 60	825	135	156	6000	3300	B 6.00/20	B 6.50/20	Con 25A	6-3 1/2 x 4 1/2	214.7	27.3	61-3000	L	C	C	2 1/2	6 1/2	4	FP	No	Til	M	A-L	A-L	19
20	Diamond T... 216B	795	135	158	8500	3300	B 6.50/20	B 6.50/20	Her JXA	6-3 1/2 x 4 1/2	228.0	27.3	56-2400	L	C	C	2 1/2	10 1/2	7	PC	No	Zen	M	A-L	A-L	20
21	Dodge Brothers	495	133	133	5840	2590	P 6.00/20	P 32x6	Own	6-3 1/2 x 4 1/2	196	21.0	48-2800	L	C	C	2 1/2	6 1/2	3	PC	No	Car	V	D-R	D-R	21
22	Dodge Brothers	595	133	133	5940	2690	P 6.00/20	P 32x6	Own	6-3 1/2 x 4 1/2	208.0	27.3	63-3200	L	C	C	2 1/2	10 1/2	7	FP	No	Zen	V	N-E	N-E	22
23	Douglas... A6	1095	135	145	7500	3075	P 30x5	P 30x5	Bud J214	6-3 1/2 x 4 1/2	189.7	27.3	61-3000	L	C	C	2 1/2	10 1/2	7	FP	No	Str	V	A-L	A-L	23
24	Fargo Freight	795	128	136	7800	3150	P 30x5	DP30x5	Con W-20	4-4 1/2 x 4 1/2	227	26.8	52-2400	L	C	C	2 1/2	5 1/2	3	FP	No	Zen	M	A-L	A-L	24
25	Fisher-Std. Sp. X-1-14	1600	142	162	7000	3900	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	53-2200	L	C	C	2 1/2	8 1/2	4	CC	No	Zen	V	A-L	A-L	25
26	Garford... S-11	825	131	180	8000	3550	B 6.00/20	B 7.00/20	Own 200	6-3 1/2 x 4 1/2	200.3	26.3	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Mar	M	D-R	D-R	26
27	(X) Gen. Mot. T-15	675	130	141	6500	2670	B 7.00/20	B 7.00/20	Own 200	6-3 1/2 x 4 1/2	200.3	26.3	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Mar	M	D-R	D-R	27
28	(X) Gen. Mot. T-18	560	131	157	8200	2735	B 5.50/20	B 6.00/20	Own 200	6-3 1/2 x 4 1/2	200.3	26.3	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Mar	M	D-R	D-R	28
29	Gramm... AX-4	895	131	180	8000	3550	B 6.00/20	B 6.50/20	Con W-10	4-3 1/2 x 4 1/2	200.4	24.0	50-2800	L	C	C	2 1/2	5 1/2	3	FP	No	Til	M	A-L	A-L	29
30	Gramm... AX-6	895	131	180	8000	3550	B 6.00/20	B 6.50/20	Con 25A	6-3 1/2 x 4 1/2	214	27.3	74-3300	L	C	C	2 1/2	6 1/2	4	FP	No	Til	M	A-L	A-L	30
31	Hahn & Selden... 7	124	149	149	6500	3100	P 30x5	P 30x5	Con 29L	6-2 1/2 x 4 1/2	185.0	19.8	45-2800	L	C	C	2 1/2	4	FP	No	Zen	V	A-L	A-L	31	
32	Indiana... 64	137	149	149	6500	3400	P 30x5	P 30x5	Con	6-3 1/2 x 4 1/2	248.2	27.3	65-2700	L	C	C	2 1/2	10 1/2	7	CC	No	Str	V	A-L	A-L	32
33	LaFrance-Republic A-1	795	132	162	6000	3000	B 5.50/20	P 32x6	Lyc WTG	6-3 1/2 x 4 1/2	201.5	21.6	60-2500	L	C	C	2 1/2	7 1/2	4	CC	No	Zen	V	A-L	A-L	33
34	LaFra-Republic A-1	810	144	144	6000	3000	B 5.50/20	P 32x6	Lyc WTG	6-3 1/2 x 4 1/2	201.5	21.6	60-2500	L	C	C	2 1/2	7 1/2	4	CC	No	Zen	V	A-L	A-L	34
35	Relay... 15AB	1400	131	162	8500	3800	P 30x5	P 30x5	Lyc 17E	6-3 1/2 x 4 1/2	214.7	27.3	52-2200	L	C	C	2 1/2	7 1/2	4	CC	No	Str	V	A-L	A-L	35
36	Relay... S-11	1700	142	162	7000	4050	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	53-2200	L	C	C	2 1/2	8 1/2	4	CC	No	Zen	V	A-L	A-L	36
37	Rugby... 614	112	112	112	4000	2045	B 5.00/19	B 5.00/19	Con 22-A	6-3 1/2 x 4 1/2	199.0	25.3	71-3300	L	C	C	2 1/2	6 1/2	4	CC	No	Str	V	A-L	A-L	37
38	Service... S-11	1600	142	162	7000	3900	P 30x5	P 30x5	Bud HS6	6-3 1/2 x 4 1/2	241.6	27.3	53-2200	L	C	C	2 1/2	8 1/2	4	CC	No	Zen	V	A-L	A-L	38
39	Sterling... FB30	795	142	162	6500	3300	B 6.50/20	B 6.50/20	Con 25A	6-3 1/2 x 4 1/2	214.7	27.3	72-3300	L	C	C	2 1/2	6 1/2	4	CC	No	Zen	V	D-R	D-R	39
40	Stewart... 30X	695	130	160	8500	3018	B 6.50/20	B 6.50/20	Lyc AFE	4-3 1/2 x 4 1/2	199.0	22.5	50-2600	L	C	C	2 1/2	7 1/2	4	CC	No	Str	V	A-L	A-L	40
41	Stewart... 30X	795	130	160	8500	3018	B 6.50/20	B 6.50/20	Lyc WSG	6-3 1/2 x 4 1/2	201.5	21.6	60-2600	L	C	C	2 1/2	7 1/2	4	CC	No	Str	V	A-L	A-L	41
42	World... DA-60	1195	150	166	6300	3650	B 6.00/20	DB6.00/20	Lyc WTG	6-3 1/2 x 4 1/2	201.5	21.6	63-2900	L	C	C	2 1/2	7 1/2	4	CC	No	Zen	V	A-L	A-L	42
1 1/4 Ton																										
43	Clinton... 20B	1995	150	opt	7750	3750	P 30x5	P 30x5	Bud WTU	4-3 1/2 x 5 1/2	226.4	22.5	36-1800	L	C	C	2 1/2	7 1/2	3	PC	No	Zen	V	D-R	D-R	43
44	(X) GMT... T-15	680	130	141	6500	2670	B 5.50/20	P 32x6	Own 200	6-3 1/2 x 4 1/2	200.3	26.3	60-3000	L	C	C	2 1/2	6 1/2	3	CC	No	Mar	M			

Line Number	Radiator Make	Clutch	Gear Set	Universal Make and No.	Rear Axle		Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number										
					Make and Model	Location	Final Drive and Type	Drive and Torque	Gear Ratios	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cap to Rear of Frame			Cap to Rear Axle	Width of Frame	Front	Rear						
1	Har	P.Own	Own Ind.	U	3	No	Own	Own Int.	8	U	4.1	13.6	Own Ind.	O4IM	101	21	Own	5x2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	30x1 1/4	54x1 1/4	N	N	1	
2	Fed	P.	Own	U	3	No	Own	Own	8	U	4.6	13.9	Own	O4IH	121	TX	War	5x1 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	35 1/4 x 1 1/4	53 1/4 x 1 1/4	N	N	2	
3	Fed	P.	Own	U	3	No	Own	Own	8	U	4.6	13.9	Own	O4IH	121	TX	War	5x1 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	35 1/4 x 1 1/4	53 1/4 x 1 1/4	N	N	3	
4	Own	D.Own	Own	U	3	No	Own	Own	8	U	4.7	14.3	Own	O4IM	168	21	Own	5x2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	30 1/4 x 1 1/4	39 1/4 x 1 1/4	N	N	4	
5	Own	D.Own	Own	U	3	No	Own	Own	8	U	4.7	14.3	Own	B4IM	308	41	Jac	6x2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	38x2	50 1/2 x 2 1/4	N	N	5	
6	Lon	P.Own	W-G T9	U	3	No	M.M.	Own	8	U	4.8	16.1	Own	B4IM	148	41	Ros	5 1/2 x 2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	36x1 1/4	51x1 1/4	N	N	6	
7	McC	P.Own	W-G T9	U	3	No	Spl	Own	8	U	4.6	12.4	Own	B4IM	143	41	Own	5 1/2 x 2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	36x1 1/4	51x1 1/4	N	N	7	
8	Fed	P.Own	Own	U	3	No	Own	Own	8	U	4.6	12.4	Own	B4IM	143	41	Own	5 1/2 x 2 1/4 x 1 1/4	C	81 1/2	28 1/2	42 1/2	36x1 1/4	51x1 1/4	N	N	8	
																			1000 Pounds									
9	Fed	P.	Own	U	3	No	Own	Own	8	U	5.63	21.1	Own	O4IH	189	TX	Han	6x2 1/4 x 1 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N	N	9	
10	Fed	P.	Own	U	3	No	Own	Own	8	U	5.11	19.2	Own	O4IH	189	TX	Han	6x2 1/4 x 1 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N	N	10	
11	Own	D.Own	Own	U	3	No	Own	Own	8	U	4.9	15.5	Own	O4IH	189	TX	Han	6x2 1/4 x 1 1/4	C	66 1/2	31	37 1/2	39x2	48x2 1/4	N	N	11	
12	Lon	P.Own	W-G T9	U	3	No	Spl 2	Sal F	8	U	5.37	34.4	Sal F	L4IH	362	TX	Ros	6 1/2 x 2 1/4 x 1 1/4	C	84	47 1/2	32	40x2	54x2 1/4	N	N	12	
13	Lon	P.Own	W-G T9	U	3	No	M.M.	Own	8	U	4.86	16.1	Own	B4IM	308	41	Jac	6x2 1/4 x 1 1/4	C	87	48	34	38x2	50 1/2 x 2 1/4	N	N	13	
14	Mod	P.M.M.	W-G T9	U	3	No	M.M.	Own	8	U	6.16	39.5	Own 101	BE4IM	212	TX	Ros	5 1/2 x 2 1/4 x 1 1/4	P	53 1/2	32 1/2	34	40x2	46x2 1/4	N	N	14	
15	Lon	P.B&B	W-G T-9	U	4	....	Blo	Own	8	U	6.00	38.4	Col 5540	L4IH	297	FX	Han	6x2 1/4 x 1 1/4	P	96	55	34	36x2 1/4	48x2 1/4	N	N	15	
																			1500 Pounds									
16	Fed	P.B&B	War T9	U	4	No	Spl 300	Tim 51000H	B	8	U	6.20	39.7	Tim 11710H	L4IH	424	FX	Gem	5 1/2 x 3 1/4 x 1 1/4	P	96	53	34	38x2 1/4	50x2 1/4	N	N	16
17	Lon	P.B-L	B-L 20	U	4	No	Blo	Col 54028	SF	8	U	5.1	25.5	Col 5530	L4IH	297	FX	Han	6x2 1/4 x 1 1/4	P	103 1/2	63	34	36x2 1/4	45x2 1/4	N	N	17
18	Per	D.Jon	W-G T9	U	4	No	Blo	Tim 53200BF	BF	8	U	5.66	36.3	Tim 3000	L4IH	380	FD	Ros	6x2 1/4 x 1 1/4	C	81 1/2	51 1/2	34	36x2 1/4	45x2 1/4	N	N	18
19	G&O	P.B&B	W-G T9	U	4	No	Spl	Tim 53200H	BF	8	U	5.6	36.3	Tim 30000H	L4IH	380	41	Ros	5 1/2 x 3 1/4 x 1 1/4	C	106 1/2	58 1/2	34	40x2 1/4	54x2 1/4	N	N	19
20	G&O	P.B&B	W-G T9	U	4	No	Spl 2	Cla B375	SF	8	U	5.6	36.3	Cla F208	L4IH	252	TX	Ros	6 1/2 x 2 1/4 x 1 1/4	C	93	51 1/2	34	42x2	50x2 1/4	N	N	20
21	Fed	P.	Own	U	4	No	3	Own	SF	8	U	5.6	36.3	Own	O4IH	206	TX	Han	6 1/2 x 2 1/4 x 1 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N	N	21
22	Fed	P.	Own	U	4	No	3	Own	SF	8	U	5.6	36.3	Own	O4IH	206	TX	Han	6 1/2 x 2 1/4 x 1 1/4	C	85 1/2	50	37 1/2	39x2	48x2 1/4	N	N	22
23	Mod	P.B&B	W-G T9	U	4	No	M.M.	Cla B370	SF	8	U	5.6	36.3	Cla F208	L4IH	377	FX	Ros	5 1/2 x 3 1/4 x 1 1/4	P	96	58 1/2	34	39 1/2 x 2	49x2 1/4	N	N	23
24	Own	P.	Own	U	4	No	U-P	Cla	SF	8	U	5.67	37.2	Own	L4IH	...	...	...	...	P	...	...	...	...	...	N	N	24
25	Lon	P.Lon	Cov F4B	U	4	No	Spl 3	Tim 52200H	SF	8	U	5.83	37.3	Tim 11703H	L4IH	...	TX	Ros	6 1/2 x 2 1/4 x 1 1/4	P	88	54 1/2	32	40x2	54x2 1/4	N	N	25
26	Lon	P.B-L	B-L 20	U	4	No	Blo	Col 54028	SF	8	U	5.1	25.5	Col 5530	L4IH	297	FX	Han	6x2 1/4 x 1 1/4	P	103 1/2	63	34	36x2 1/4	48x2 1/4	N	N	26
27	Lon	P.Own	Own	U	3	No	M.M.	Own	SF	8	U	4.83	16.0	Own	B4IM	308	41	Jac	6x2 1/4 x 1 1/4	P	87	48	34	38x2	50 1/2 x 2 1/4	N	N	27
28	Lon	P.Own	Own	U	3	No	Own	Tim 53200H	SF	8	U	5.43	35.0	Own	O4IM	361	21	Jac	6x2 1/4 x 1 1/4	P	86 1/2	51 1/2	37	36x1 1/4	45x2 1/4	N	N	28
29	Per	D.Jon	W-G T9	U	4	No	Blo	Tim 53200H	BF	8	U	5.66	36.3	Tim	L4IH	380	FD	Ros	6x2 1/4 x 1 1/4	C	81 1/2	51 1/2	34	36x2 1/4	45x2 1/4	N	N	29
30	Per	D.Jon	W-G T9	U	4	No	Blo	Tim 53200H	BF	8	U	5.66	36.3	Tim	L4IH	380	FD	Ros	6x2 1/4 x 1 1/4	C	81 1/2	51 1/2	34	36x2 1/4	45x2 1/4	N	N	30
31	G&O	P.B&B	W-L 20	U	4	No	Spl 2	Col	SF	8	U	5.12	21.3	Col	C4IM	244	TX	Ros	5 1/2 x 2 1/4 x 1 1/4	C	86	56	34	37x2 1/4	52x2 1/4	N	N	31
32	Lon	P.B&B	B-L	U	3	No	Spl 2	Col	SF	8	U	5.12	21.3	Col	C4IM	244	TX	Ros	5 1/2 x 2 1/4 x 1 1/4	C	86	56	34	37x2 1/4	52x2 1/4	N	N	32
33	Per	P.B&B	FulWo-BB	U	4	No	Spl 3	Tim 51000H	SF	8	U	5.86	36.4	Tim 11710-H	L4IH	378	TX	Han	5 1/2 x 2 1/4 x 1 1/4	C	108	66	31 1/2	38x2	52 1/2 x 2 1/4	N	N	33
34	Per	P.B&B	FulWo-BB	U	4	No	Spl 3	Tim 51000H	SF	8	U	5.86	36.4	Tim 11710H	L4IH	378	TX	Han	5 1/2 x 2 1/4 x 1 1/4	C	108	66	31 1/2	38x2	52 1/2 x 2 1/4	N	N	34
35	Lon	P.B&B	W-L 20	U	4	No	Blo	Own	2R	8	U	6.00	38.4	Col 5540	L4IH	297	FX	Han	6x2 1/4 x 1 1/4	C	106 1/2	63	34	36x2 1/4	48x2 1/4	N	N	35
36	Lon	P.B-L	B-L 20	U	4	No	Spl	Adams	SF	8	U	5.14	25.5	Col 5530	L4IH	297	FX	Han	6x2 1/4 x 1 1/4	C	103 1/2	63	34	36x2 1/4	48x2 1/4	N	N	36
37	McC	P.B&B	W-L 20	U	3	No	Spl	Adams	SF	8	U	5.1	25.5	Adams	S4IM	178	41	War	5 1/2 x 2 1/4 x 1 1/4	C	52 1/2	26	41	36x1 1/4	55x2	N	N	37
38	Lon	P.B-L	B-L 20	U	4	No	Blo	Col 54028	SF	8	U	5.1	25.5	Col 5530	L4IH	...	...	Han	6x2 1/4 x 1 1/4	C	103 1/2	63	34	36x2 1/4	48x2 1/4	N	N	38
39	Per	P.B&B	War	U	4	No	Spl	Tim	BF	8	U	5.66	36.3	Tim	L4IH	...	TX	Ros	6x2 1/4 x 1 1/4	C	96	57	34	38x2 1/4	50x2 1/4	N	N	39
40	Fed	P.B&B	War	U	4	No	Spl	Sal	SF	8	U	5.6	35.8	Sal	B4IM	...	TX	Ros	6x2 1/4 x 1 1/4	C	77 1/2	40	32	38x2 1/4	50x2 1/4	N	N	40
41	Fed	P.B&B	War	U	4	No	Spl	Sal	SF	8	U	5.6	35.8	Sal	B4IM	...	TX	Ros	6x2 1/4 x 1 1/4	C	77 1/2	40	32	38x2 1/4	50x2 1/4	N	N	41
42	Per	P.Lon	WGT9	U	4	No	Spl 3	Tim 53200H	SF	8	U	6.38	40.8	Tim 30000H	L4IH	377	TX	Ros	6 1/2 x 2 1/4 x 1 1/4	C	126	70	34	38x2 1/4	54x2 1/4	N	N	42
																			1 1/4 Ton									
43	Per	D.B-L	B-L 31	U	3	No	Blo	Col B501	B	8	U	6.28	29.5	Shu 5405	C2XM	189	21	Ros	5 1/2 x 3 1/4 x 1 1/4	T	Opt	Opt	34	35 1/2 x 2 1/4	51x2 1/4	N	N	43
44	Lon	P.Own	Own	U	3	No	M.M.	Own	SF	8	U	6.43	31.6	Own	B4IM	308	41	Jac	6x2 1/4 x 1 1/4	C								

Line Number	Make, Model and Capacity	General			Tire Size		Engine														Fuel System		Electrical System		Line Number		
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make		Generator, Starter Make	
1½ Ton—Cont'd																											
1	International A-3½	1250	136	160	10100	3600	B 6.00/20	DB6.00/20	Lyc SAH	6-3¼x4½	224.0	25.3	54-2700	L	G	C	2½	8	4	PC	No	Zen	M	D-R	D-R	1	
2	International AL-3½	1450	138	164	10100	4032	B 6.00/20	DB6.00/20	Lyc 48LH	6-3¼x4½	224.0	25.3	54-2700	L	G	C	2½	8	4	PC	No	Zen	M	D-R	D-R	2	
3	Kenworth 85 1½-2 Ton	1275	140	152	8000	3625	B 7.00/20	B 7.00/20	Con 18E	6-3¼x4½	214.7	27.3	61-3000	L	G	C	2½	8	4	PC	No	Str	V	A-L	A-L	3	
4	Kleiber 80	80	140	153	7500	3300	B 6.00/20	P 32x6	Lyc 48L	6-3¼x4½	224.0	25.3	61-3000	L	G	C	2½	8	4	PC	No	Str	V	A-L	A-L	4	
5	LaFrance-Republic C-1	80	144	175	7500	3300	B 6.00/20	P 32x6	Lyc 48L	6-3¼x4½	224.0	25.3	61-3000	L	G	C	2½	8	4	PC	No	Str	V	A-L	A-L	5	
6	Lange 25	19225	140	172	9300	4600	P 32x6	P 32x6	Her WXB	6-3¼x4½	298.0	33.7	67-2400	L	G	C	2½	13	7	PC	No	Zen	M	A-L	A-L	6	
7	Larrabee 25	19445	152	160	9375	4200	B 7.00/20	B 7.00/20	Con 16C	6-3¼x4½	248.2	27.3	65-2700	L	G	C	2½	10	7	PC	No	Zen	G	D-R	D-R	7	
8	LeMoon HB10	1500	140	152	10000	3300	B 6.50/20	B 6.50/20	Con 16C	6-3¼x4½	248.0	27.3	65-2800	L	G	C	2½	10	7	PC	No	Str	G	D-R	D-R	8	
9	Maccar 36A	2050	155	171	10100	4800	B 7.00/20	DB7.00/20	Bud H-298	6-3¼x4½	298.0	33.7	83-2800	L	G	C	2½	10	7	PC	No	Str	G	D-R	D-R	9	
10	Mack BL 2500	138	148	183	7000	3200	B 6.00/20	DB6.00/20	Own BI	6-3¼x4½	248.9	25.4	58-2600	L	G	C	2½	10	7	PC	Ha	Str	V	A-L	A-L	10	
11	Netco A 2800	146	168	7000	4000	B 6.00/20	B 6.00/20	Wau 6TL	6-3¼x4½	255.0	27.3	68-2600	L	G	C	2½	10	7	PC	Ha	Str	M	A-L	A-L	11		
12	Relay 40CA	3040	168	180	10000	5550	P 34x5	DP34x5	Bud DW6	6-3¼x4½	331.3	33.7	64-2100	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	12	
13	Relay S 11	1900	162	180	10000	4500	P 30x5	DP30x5	Bud HS 6	6-3¼x4½	241.6	27.3	53-2200	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	13	
14	Reo 1A, IC	625	136	160	8000	2930	B 6.00/20	P 32x6	Own	4-3½x4½	205.0	23.3	51-2500	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	14	
15	Reo 1B, 1D	725	136	160	8000	2970	B 6.00/20	P 32x6	Own	6-3¼x4½	214.7	27.3	61-3000	L	G	C	2½	10	7	PC	No	Zen	M	D-R	D-R	15	
16	Reo DFX Tonner	1000	155	171	9000	3200	B 6.00/20	DB6.00/20	Con 25A	6-3¼x4½	248.2	27.3	65-2700	L	G	C	2½	12	7	CC	No	Sch	V	D-R	D-R	16	
17	Reo DFX Tonner	895	135	153	8000	3200	B 6.00/20	P 32x6	Own	6-3¼x4½	248.2	27.3	65-2700	L	G	C	2½	12	7	CC	No	Sch	V	D-R	D-R	17	
18	Rugby 6-15	865	135	153	7150	2850	B 5.50/20	P32x6	Con 22A	6-3¼x4½	199.0	25.3	71-3300	L	C	S	2½	6	4	PC	No	Str	M	A-L	A-L	18	
19	Rugby 6-15	865	135	153	7150	3110	B 5.50/20	B 5.50/20	Con 22A	6-3¼x4½	199.0	25.3	71-3300	L	C	S	2½	6	4	PC	No	Str	M	A-L	A-L	19	
20	Schacht 10H, 1½-2½	156	195	156	195	4450	B 6.50/20	DB6.50/20	Con 16C	6-3¼x4½	248.3	27.3	65-2600	L	G	C	2½	10	7	PC	No	Zen	G	D-R	D-R	20	
21	Service 40	2990	168	180	10000	4700	P 34x5	DP34x5	Bud DW 6	6-3¼x4½	331.0	33.7	64-2100	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	21	
22	Service S11	1900	162	180	10000	4300	P 30x5	DP30x5	Bud HS6	6-3¼x4½	241.6	27.3	53-2200	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	22	
23	Sterling FE30	795	142	162	8000	3300	B 6.50/20	B 6.50/20	Con 25A	6-3¼x4½	214.7	28.0	72-3300	L	C	S	2½	6	4	CC	No	Sch	V	D-R	D-R	23	
24	Stewart 40XA	995	145	176	8000	3460	B 6.50/20	DB6.50/20	Lyc SA	6-3¼x4½	224.0	25.3	61-3000	L	G	C	2½	8	4	PC	No	Str	V	A-L	A-L	24	
25	Studebaker S-20	695	130	160	11000	2840	B 6.00/20	P 32x6	Own	6-3¼x4½	205.0	25.4	70-3200	L	G	C	2½	9	4	CC	No	Str	M	D-R	D-R	25	
26	White 602 1½-2½	2050	138	157	10000	4050	B 7.00/20	B 7.00/20	Own 2A	6-3¼x4½	260.9	29.4	54-2100	L	G	C	2½	10	7	PC	No	Str	V	D-R	D-R	26	
27	Wichita 6-21	2600	160	190	11000	4695	P 32x6	DP32x6	Wau MS	6-3¼x4½	315.7	27.3	70-2200	L	G	C	2½	12	7	CC	No	Str	V	D-R	D-R	27	
28	Willis Six C-131	595	131	131	7000	2625	B 5.50/20	P 32x6	Own C-131	6-3¼x4½	193.0	25.3	65-3400	L	C	S	2½	6	4	CC	No	Str	V	A-L	A-L	28	
29	Willis Six C-157	630	157	157	7000	2900	B 5.50/20	P 32x6	Own C-157	6-3¼x4½	193.0	25.3	65-3400	L	C	S	2½	6	4	CC	No	Str	V	A-L	A-L	29	
30	Witt-Will S15B	2100	147	153	10500	4500	P 30x5	DP30x5	Con 84	6-3¼x4½	255.3	28.9	50-2200	L	C	S	2½	6	4	CC	No	Zen	M	D-R	D-R	30	
31	Witt-Will C15B	2200	158	158	10500	5170	P 30x5	DP30x5	Con 16C	6-3¼x4½	248.2	27.3	66-3200	L	G	C	2½	10	7	PC	No	Str	M	D-R	D-R	31	
32	Woods 32	1995	160	190	10000	4400	B 6.50/20	DB6.50/20	Her WXA-2	6-3¼x4½	260.9	29.4	60-2400	L	G	C	2½	13	7	PC	No	Str	M	A-L	A-L	32	
33	World DB-60	1545	150	166	10000	3900	B 6.50/20	DB6.50/20	Lyc 48L	6-3¼x4½	224.0	25.3	61-2750	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	33	
1¾ Ton																											
34	Condor CB	1460	140	174	12000	4150	B 6.50/20	DB6.50/20	Lyc 48L	6-3¼x4½	224.0	25.3	61-2900	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	34	
35	Federal F7	1525	132	152	10000	3765	P 30x5	DP30x5	Con 16C	6-3¼x4½	248.0	27.3	64-2500	L	G	C	2½	10	7	PC	No	Zen	V	A-L	A-L	35	
36	Gramm B	1400	140	196	12000	4150	B 6.50/20	DB6.50/20	Lyc 48L	6-3¼x4½	224.0	25.3	61-2900	L	G	C	2½	8	4	PC	No	Zen	V	A-L	A-L	36	
2 Ton																											
37	Acme 4X	179	Op	12500	5500	B 7.50/20	DB7.50/20	Con 16R	6-4x4½	311.3	38.4	73-2400	H	G	C	2½	13	7	PC	Ha	Str	M	A-L	A-L	37		
38	Atterbury 45	160	160	10000	3955	P 32x6	DP32x6	Lyc 48L	6-3¼x4½	224.0	25.3	62-2800	L	G	C	2½	8	4	CC	No	Zen	G	D-R	D-R	38		
39	Atterbury 45	175	188	10000	5300	B 7.50/20	DB7.50/20	Lyc ASB	6-3¼x4½	278.0	31.6	85-3000	L	G	C	2½	13	7	PC	No	Zen	M	A-L	A-L	39		
40	Autocar 3200	150	192	12000	5400	P 34x7	P34x7	Own	6-4x4½	358.0	38.4	82-2400	L	G	C	2½	13	7	PC	No	Str	V	D-R	D-R	40		
41	Autocar D 3500	150	192	12000	5710	P 34x7	DP34x7	Own	6-4x4½	358.0	38.4	82-2400	L	G	C	2½	13	7	PC	No	Str	V	D-R	D-R	41		
42	Available T12	Op	Op	11000	3850	B 6.50/20	B 6.50/20	Wau ZK	6-3¼x4½	221.7	27.3	62-3400	L	G	C	2½	7	6	4	PC	No	Sch	M	D-R	D-R	42	
43	Available T-20	Op	Op	13500	5000	P 7.00x20	DP7.00x20	Wau TL	6-3¼x4½	221.7	27.3	62-3400	L	G	C	2½	7	6	4	PC	No	Sch	M	D-R	D-R	43	
44	Brookway 92	149	168	9200	4250	P 32x6	DP32x6	Con	6-3¼x4½	248.0	27.3	65-2700	L	G	C	2½	10	7	CC	No	Zen	M	A-L	A-L	44		
45	Brookway 120	156	170	12000	5400	P 32x6	DP32x6	Con	6-4x4½	311.0	38.4	73-2400	H	G	C	2½	13	7	CC	No	Zen	M	A-L	A-L	45		
46	Chicago 1-15-E	150	174	10000	4200	B 6.50/20	DB6.00/20	Wau ZK	6-3¼x4½	222.0	27.3	62-3000	L	G	C	2½	6	4	PC	No	Zen	M					

Line Number	Radiator Make	Clutch	Type and Make	Gearset	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universal Make and No.	Rear Axle			Front Axle			Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number			
									Make and Model	Final Drive and Type	Drive and Torque	Gear Ratio in High	Gear Ratio in Low	Make and Model	Service	Area Service Brakes	Hand	Steering Gear Make	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle			Width of Frame	Front	Rear
1 1/2 Ton—Cont'd																											
1	Mod	P. Roe	WG T-7	U	4	No		M.M.5	Own 710	SF	H 5.28 33.8	Own 200	B4IM	302 2I	Ros	7x2 1/2 x 1 1/2	T	93%	53 1/2	32 1/2	40x2 1/2	46x2 1/2	1				
2	Per	P. Own	W-G T7	U	4	No		M.M.5	Own 800	SF	H 5.50 42.9	Own 200	B4IM	295 2I	Ros	6 1/2 x 2 1/2 x 1 1/2	T	98 1/2	55 1/2	32 1/2	40x2 1/2	52x2 1/2	2				
3	Per	P. B-L	B-L 214	U	4	No		Spl 4	Cla B370	SF	H 5.4 34.6	Cla F208	L4IH	222 TX	Ros	5 1/2 x 3 1/2 x 1 1/2	T	101	56 1/2	34 1/2	40x2 1/2	52x2 1/2	3				
4	Mod	P. B-L	B-L 214	U	4	No		Spl 4	Tim 53200H	BF	H 5.8 34.0	Tim 3000H	L4IH	308 TX	Ros	5 1/2 x 3 1/2 x 1 1/2	T	101	56 1/2	34 1/2	40x2 1/2	52x2 1/2	4				
5	Per	P. B-L	WO-BB	U	4	No		Spl 3	Tim 52200H	SF	R 5.83 35.8	Tim 1710H	L4IH	413 TX	Han	6x2 1/2 x 1 1/2	C	109	60 1/2	32	38x2 1/2	57 1/2 x 2 1/2	5				
6	Mod	P. B-L	B-L 31	U	4	No		Spl 4	Tim 54000H	BF	R 5.83 38.0	Tim 12703H	L4IH	279 CD	Ros	5x2 1/2 x 1 1/2	C	84	56	33	38x2 1/2	50x2 1/2	6				
7	Per	P. B-L	B-L 314	U	4	No		Spl 4	Tim 53200H	BF	H 5.83 37.4	Tim 12703H	L4IH	452 TD	Ros	6x3 1/2 x 1 1/2	C	109	60 1/2	32	38x2 1/2	54x2 1/2	7				
8	Chl	P. B-L	B-L 314	U	4	No		Spl 2	Tim 54200H	BF	H 5.17 25.8	Tim 3000H	L4IH	136 TX	Ros	6x3 1/2 x 1 1/2	C	96	58	34	37 1/2 x 2 1/2	49 1/2 x 2 1/2	8				
9	Per	P. B-L	B-L 314	U	4	No		Spl 3	Tim 54200H	BF	R 4.86 30.6	Tim 14703H	L4IH	315 TX	Ros	6 1/2 x 3 1/2 x 1 1/2	T	117 1/2	74 1/2	32	42x2 1/2	54x2 1/2	9				
10	Own	D. Own	Own BG	U	4	No		Spl 4	Tim 52000H	SF	H 4.86 24.0	Own BL	L4IH	302 FX	Gem	7x3 1/2 x 1 1/2	C	109	64 1/2	33 1/2	40x2 1/2	52 1/2 x 2 1/2	10				
11	Mod	P. B-L	B-L 214	U	4	No		Pet 2	Tim 52000H	SF	H 4.85 Opt	Tim 11703H	L4IH	229 ID	Ros	6x2 1/2 x 1 1/2	C	108	72	34	40x2 1/2	50x3	11				
12	Lon	D. Ful	FuMGU 14	U	4	No		Blo	Own 30	2R	H 6.45 41.8	Tim 3500H	L4IH	394 FX	Han	6x3 1/2 x 1 1/2	C	144	90	34	40x2 1/2	50x3	12				
13	Lon	P. B-L	B-L 20	U	4	No		Blo	Own 20	2R	H 6.00 39.0	Col 5530	L4IH	297 FX	Han	6x2 1/2 x 1 1/2	C	133 1/2	83	34	36x2 1/2	48x2 1/2	13				
14	Per	P. Lon	Cla	U	4	No		Cle	Cla B-373	SF	H 5.6 36.9	Own	L4IH	230 TX	Ros	7x2 1/2 x 1 1/2	C	102 1/2	60 1/2	34	40x2 1/2	50x2 1/2	14				
15	Per	P. Lon	Cla	U	4	No		Cle	Cla B-373	SF	H 5.1 33.7	Own	L4IH	230 TX	Ros	7x2 1/2 x 1 1/2	C	102 1/2	60 1/2	34	40x2 1/2	50x2 1/2	15				
16	Own	dp. Lon	Clark	U	4	No		Cle	Own	SF	H 5.2 34.5	Sal	S4IM	275 TX	War	6x2 1/2 x 1 1/2	C	91 1/2	57 1/2	34 1/2	36 1/2 x 2	50x2 1/2	16				
17	Own	dp. Lon	Own	U	4	No		Cle	Own	SF	H 5.2 34.5	Sal	S4IM	275 TX	War	6x2 1/2 x 1 1/2	C	91 1/2	57 1/2	34 1/2	36 1/2 x 2	50x2 1/2	17				
18	McC	P. B-L	B-L	U	4	No		Spl	Sal	SF	H 5.38 34.5	Sal	S4IM	275 TX	War	6x2 1/2 x 1 1/2	C	91 1/2	57 1/2	34 1/2	36 1/2 x 2	50x2 1/2	18				
19	McC	P. B-L	B-L	U	4	No		Spl	Sal	SF	H 5.38 34.5	Sal	S4IM	275 TX	War	6x2 1/2 x 1 1/2	C	91 1/2	57 1/2	34 1/2	36 1/2 x 2	50x2 1/2	19				
20	Yon	P. Own	Ful Wo	U	4	No		Spl	Tim 53200H	BF	H 5.83 31.2	Tim 3000H	L4IH	380 TX	Ros	6x3 1/2 x 1 1/2	C	102 1/2	60 1/2	34	40x2 1/2	50x2 1/2	20				
21	Lon	D. Ful	FulMGU	U	4	No		Blo	Tim 63702	WF	H 6.5 34.8	Tim 3500H	L4IH	394 FX	Han	6x3 1/2 x 1 1/2	C	144	90	34	40x2 1/2	50x3	21				
22	Lon	P. B-L	B-L 20	U	4	No		Blo	Tim 54000H	SF	H 5.8 29.2	Col 5530	L4IH	297 FX	Han	6x2 1/2 x 1 1/2	C	133 1/2	83	34	36x2 1/2	48x2 1/2	22				
23	Per	P. B-L	War	U	4	No		Spl	Tim 54200H	BF	H 5.66 37.6	Tim 3000H	L4IH	269 TX	Ros	6x2 1/2 x 1 1/2	C	96	57	34	38x2 1/2	50x2 1/2	23				
24	Fed	P. B-L	War	U	4	No		Spl	Tim 54200H	BF	H 5.66 37.6	Tim 3000H	L4IH	269 TX	Ros	6x2 1/2 x 1 1/2	C	96	57	34	38x2 1/2	50x2 1/2	24				
25	McC	Lon	War T-9	U	4	No		Spl	Clark B-373	SF	H 5.66 35.8	Clark 208B	B4IM	224 TX	Ros	7 1/2 x 2 1/2 x 1 1/2	C	77 1/2	40 1/2	32	38x2 1/2	50x2 1/2	25				
26	Yon	P. Own	Own 5B	U	4	No		Spl 3	Own 4CB	WF	H 6.4 31.9	Tim 3100H	L4IH	378 CD	Ros	6x2 1/2 x 1 1/2	C	81 1/2	50 1/2	34	36x1 1/2	45x2 1/2	26				
27	Yon	D. Ful	Ful MLU	U	4	No		Spl 3	Own 30R	WF	H 6.5 34.8	Shb 3FA10	O2IM	320 RI	Ros	5 1/2 x 2 1/2 x 1 1/2	C	130 1/2	78 1/2	30	40x2 1/2	50x3	27				
28	Fed	P. Own	War	U	4	No		Spl	Cla	SF	H 6.37 40.8	Own	B4IM	235 4I	Own	6x2 1/2 x 1 1/2	C	86 1/2	51 1/2	37	36x1 1/2	45x2 1/2	28				
29	Fed	P. Own	War	U	4	No		Spl	Cla	SF	H 6.37 40.8	Own	B4IM	235 4I	Own	7 1/2 x 2 1/2 x 1 1/2	C	121 1/2	77 1/2	37	36x1 1/2	45x2 1/2	29				
30	Per	D. B-L	B-L 20	U	4	No		Spl	Tim 53200H	BF	H 5.66 36.3	Tim 3000H	L4IH	... TX	Ros	6x2 1/2 x 1 1/2	C	...	...	...	41x2 1/2	54x3	30	
31	Per	D. B-L	B-L 20	U	4	No		Spl	Tim 53200H	BF	H 5.66 31.2	Tim 3000H	L4IH	... TX	Ros	6x2 1/2 x 1 1/2	C	...	...	...	41x2 1/2	54x3	31	
32	Chl	D. B-L	B-L	U	4	No		Blo 2	Tim 54200H	BF	H 5.66 37.6	Tim 3000H	L4IH	353 CD	Ros	6 1/2 x 3 1/2 x 1 1/2	C	107 1/2	64 1/2	34	40x2 1/2	50x2 1/2	32				
33	Per	dp. Lon	WG T9	U	4	No		Spl 3	Tim 53200H	SF	H 6.38 40.8	Tim 3000H	L4IH	377 TX	Ros	6 1/2 x 2 1/2 x 1 1/2	T	126	70	34	38x2 1/2	54x2 1/2	33				
1 3/4 Ton																											
34	Per	D. Own	Cov A4J	U	4	No		Blo	Tim 54200H	BF	H 5.83 37.1	Col 4003	L4IH	278 FD	Ros	6x2 1/2 x 1 1/2	C	94	56	34	40x2 1/2	50x2 1/2	34				
35	Lon	P. B-L	Cov A4J	U	4	No		Pet	Tim 52005H	SF	H 5.83 29.2	Tim 11704H	L4IH	413 TI	Ros	6x2 1/2 x 1 1/2	C	95	56	34	38x2 1/2	50x2 1/2	35				
36	Per	D. Own	Cov A4J	U	4	No		Blo	Tim 54200H	BF	H 5.83 37.1	Tim 3100H	L4IH	402 FD	Ros	6x2 1/2 x 1 1/2	C	94	60 1/2	34	40x2 1/2	50x2 1/2	36				
2 Ton																											
37	Per	P. B-L	B-L 314	U	4	No		Spl	Tim 56200H	BF	R 6.16 40.6	Tim 3300H	L4ID	578 TX	Ros	6x3 1/2 x 1 1/2	P	144	92	34	38x2 1/2	54x2 1/2	37				
38	Per	P. B-L	Cov F4B	U	4	No		Spl	Tim 54200H	BF	H 6.00 45.1	Tim 3100H	L4IH	450 ...	Ros	5 1/2 x 3 1/2 x 1 1/2	P	142	81 1/2	34	38x2 1/2	50x7 1/2	38				
39	Per	P. B-L	Cov F4C	U	4	No		Spl	Tim 54200H	BF	H 6.00 45.1	Tim 3100H	L4IH	450 ...	Ros	5 1/2 x 3 1/2 x 1 1/2	P	142	81 1/2	34	38x2 1/2	50x7 1/2	39				
40	Per	dp. Lon	Own T	U	4	No		Spl	Own SA	SF	H 5.22 27.9	Tim 14703H	LO4ID	460 2IM	Ros	6 1/2 x 3 1/2 x 1 1/2	C	115 1/2	63 1/2	34	40x2 1/2	54x3	40				
41	Per	dp. Lon	Own T	U	4	No		Spl	Own SD	2F	H 6.27 33.5	Tim 14703H	LO4ID	460 2IM	Ros	6 1/2 x 3 1/2 x 1 1/2	C	115 1/2	63 1/2	34	40x2 1/2	54x3	41				
42	Chl	P. Jon	W-G T9	U	4	No		Spl 3	Tim 53200H	SF	H 6.6 42.2	Tim 3000H	L4IH	362 TX	Ros	6x2 1/2 x 1 1/2	C	105 1/2	61 1/2	34	38x2 1/2	48x2 1/2	42				
43	Chl	D. B-L	B-L 224	U	4	No		Spl	Tim 54300H	SF	R 6.8 43.6	Tim 3100H	L4IH	552 TX	Ros	6x2 1/2 x 1 1/2	C	113	67 1/2	34	38x2 1/2	50x3	43				
44	G&O	P. B-L	B-L	U	4	No		Spl	Tim 54300H	SF	H 5.83 37.4	Col	CB4IM	353 CD	Ros	5 1/2 x 2 1/2 x 1 1/2	C	113	67 1/2	34	37x2 1/2	52x2 1/2	44				
45	G&O	P. B-L	B-L	U	4	No		Spl 3	Tim 54300H	SF	H 5.83 37.4	Col	CB4IM	353 CD	Ros	5 1/2 x 2 1/2 x 1 1/2	C	113	67 1/2								

Line Number	Make, Model and Capacity	General			Tire Size		Make and Model	Number of Cylinders Bore and Stroke	Engine										Fuel System		Electrical System		Line Number				
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)			Front	Rear	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make	Carburetor Make		Fuel Feed	Ignition System Make	Generator, Starter Make	
2 Ton—Cont'd																											
1	Sterling FB55-2, 2 1/2 T	1850	159	182	4950	B7.00/20	DB7.00/20	Con 16C	6-3 1/2 x 4 1/2	248.	28.0	66-3000	L	CC	CC	CC	3 1/2	9 1/2	7	CC	No	Zen	M	D-R	D-R	1	
2	Stewart	1850	159	182	4950	B7.00/20	DB7.00/20	Lyc SB	6-3 1/2 x 4 1/2	242	27.0	65-2800	L	CC	CC	CC	3 1/2	9 1/2	7	CC	No	Zen	M	D-R	D-R	2	
3	Stewart	1850	159	182	4950	B7.00/20	DB7.00/20	Lyc ASD	6-3 1/2 x 4 1/2	299.0	33.8	85-2750	L	CC	CC	CC	3 1/2	9 1/2	7	CC	No	Zen	M	D-R	D-R	3	
4	Studebaker	1850	159	182	4950	B7.00/20	DB7.00/20	Own	6-3 1/2 x 4 1/2	255.0	25.4	70-3200	L	CC	CC	CC	3 1/2	9 1/2	7	CC	No	Zen	M	D-R	D-R	4	
5	White	161 1 to 2T	1450	138	197	4980	B7.00/20	Own 4A	6-3 1/2 x 4 1/2	289.0	33.7	61-2100	L	CC	CC	CC	3 1/2	10 1/2	7	CC	No	Zen	M	D-R	D-R	5	
6	White	161 1 to 2T	1450	138	197	4980	B7.00/20	Own GRCB	4-4 x 5 1/2	289.0	25.6	45-1800	L	CC	CC	CC	3 1/2	11 1/2	7	CC	No	Zen	M	D-R	D-R	6	
7	White	162 1 to 2T	1387	157	1000	4260	B7.00/20	Own GRCB	4-4 x 5 1/2	289.0	25.6	45-1800	L	CC	CC	CC	3 1/2	11 1/2	7	CC	No	Zen	M	D-R	D-R	7	
8	Witt-Will	C2B	2450	158	12500	5400	B6.50/20	Con 16C	6-3 1/2 x 4 1/2	248	27.3	66-3200	L	CC	CC	CC	3 1/2	10 1/2	7	CC	No	Zen	M	D-R	D-R	8	
9	Witt-Will	C2W	2550	158	12500	5400	B6.50/20	Con 16C	6-3 1/2 x 4 1/2	248	27.3	66-3200	L	CC	CC	CC	3 1/2	10 1/2	7	CC	No	Zen	M	D-R	D-R	9	
10	Witt-Will	R2B	158	158	12500	5820	B6.50/20	Con 16R	6-4 x 4 1/2	311	38.4	77-2400	L	CC	CC	CC	3 1/2	11 1/2	7	CC	No	Zen	M	D-R	D-R	10	
11	Witt-Will	R2	158	158	12500	5820	B6.50/20	Con 16R	6-4 x 4 1/2	311	38.4	77-2400	L	CC	CC	CC	3 1/2	11 1/2	7	CC	No	Zen	M	D-R	D-R	11	
12	Woods	1-25-E	1450	156	164	4275	B 7.50/20	DB7.50/20	Her WXB	6-3 1/2 x 4 1/2	298	33.7	68-2400	L	CC	CC	CC	3 1/2	13 1/2	7	CC	No	Zen	M	D-R	D-R	12
13	World	DC-60	1845	150	164	4440	B 7.00/20	Lyc ASD	6-3 1/2 x 4 1/2	224	25.3	61-2750	L	CC	CC	CC	3 1/2	7 1/2	5	CC	No	Zen	M	A-L	A-L	13	
14	World	DA-88	2300	151	167	4720	B 7.50/20	Lyc GU	8-3 x 4 1/2	268	28.8	96-3400	L	CC	CC	CC	3 1/2	8 1/2	5	CC	No	Zen	M	A-L	A-L	14	
2 1/2 Ton																											
15	Atterbury	50	189	202	14000	5800	B 8.25/20	DB8.25/20	Lyc ASD	6-3 1/2 x 4 1/2	298.2	33.7	85-2800	L	CC	CC	2 1/2	13 1/2	4	CC	Ha	Zen	M	A-L	A-L	15	
16	Autocar	3500	150	192	16000	5710	P 34x7	DP34x7	Own	6-4 x 4 1/2	358.0	33.8	82-2400	L	CC	CC	2 1/2	13 1/2	4	CC	Ha	Zen	M	A-L	A-L	16	
17	Available	T-23	Op	Op	16000	5800	P 7.50/20	DP7.50/20	Wau MS	6-3 1/2 x 4 1/2	315	33.8	73-2300	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	17	
18	Available	T-27	Op	Op	17000	6000	P 7.50/20	DP7.50/20	Wau MS	6-3 1/2 x 4 1/2	315	33.8	73-2300	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	18	
19	Brookway	140	156	188	14000	6100	P 32x6	DP32x6	Con	6-4 x 4 1/2	311.0	33.8	73-2400	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	19	
20	Chicago	1-25-E	160	208	11400	5100	B 7.00/20	DB7.00/20	Wau TK	6-3 1/2 x 4 1/2	331.0	27.3	79-2700	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	20	
21	Coleman	C-30	120	144	12800	7700	B 9.00/20	B 9.00/20	Bud DW6	6-3 1/2 x 4 1/2	331.0	33.7	83-2100	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	21	
22	Commerce	60	156	188	14000	6100	P 32x6	DP32x6	Bud BA-6	6-4 x 4 1/2	311.0	33.7	83-2100	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	22	
23	Commerce	40	156	188	14000	6100	P 32x6	DP32x6	Bud BA-6	6-4 x 4 1/2	311.0	33.7	83-2100	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	23	
24	Concor	CD 1950	160	196	17000	5200	B 7.50/20	DB7.50/20	Lyc ASD	6-3 1/2 x 4 1/2	299.0	33.7	85-2800	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	24	
25	Day Elder	130	225	157	199	6600	B 7.50/20	DB7.50/20	Con 16R	6-3 1/2 x 4 1/2	311.0	33.8	73-2400	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	25	
26	Diamond T	303F	1695	180	13500	4870	B 7.00/20	DB7.00/20	Her WXB	6-3 1/2 x 4 1/2	339.0	33.8	77-2400	L	CC	CC	2 1/2	13 1/2	4	CC	Ha	Zen	M	A-L	A-L	26	
27	Diam. T. 303FB	2-2 1/2	2375	199	13500	6100	B 7.50/20	DB7.50/20	Her WXC	6-4 x 4 1/2	339.0	33.8	74-2400	L	CC	CC	2 1/2	13 1/2	4	CC	Ha	Zen	M	A-L	A-L	27	
28	Diamond T. 551B	2-3	2250	168	186	6000	B 7.50/20	DB7.50/20	Her WXC	6-4 x 4 1/2	339.0	33.8	74-2400	L	CC	CC	2 1/2	13 1/2	4	CC	Ha	Zen	M	A-L	A-L	28	
29	Douglas	CD4	3855	190	Op	17500	5800	P 34x7	Bud EBU-I	6-4 x 4 1/2	312.0	28.9	49-1900	L	CC	CC	2 1/2	10 1/2	4	CC	Ha	Zen	M	A-L	A-L	29	
30	Douglas	CD6	3955	190	Op	17500	5800	P 34x7	Bud EBU-I	6-4 x 4 1/2	312.0	28.9	49-1900	L	CC	CC	2 1/2	10 1/2	4	CC	Ha	Zen	M	A-L	A-L	30	
31	Fageol	250	2750	178	196	5750	P 34x7	DP34x7	Wau MK	6-4 x 4 1/2	381.0	40.8	82-2200	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	31	
32	Federal	A6T	2185	151	176	5110	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	27.3	65-2600	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	32	
33	Federal	A6TW	2360	151	176	5110	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	27.3	65-2600	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	33	
34	Federal	T3W	2190	148	185	5110	P 32x6	P 36x8	Wau V	4-4 x 5	251	25.6	50-2000	L	CC	CC	2 1/2	10 1/2	4	CC	Ha	Zen	M	A-L	A-L	34	
35	Federal	T8WF	2285	148	185	5400	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	27.3	65-2600	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	35	
36	Fisher-Standard	25A	156	162	13200	4000	P 32x6	DP32x6	Con 16C	6-3 1/2 x 4 1/2	248	27.3	65-2600	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	36	
37	F.W.D.	H6H	4000	138	170	12900	P 36x8	P 36x8	Wau MK	6-4 x 4 1/2	381.0	40.8	85-2700	L	CC	CC	2 1/2	12 1/2	4	CC	No	Zen	M	A-L	A-L	37	
38	Garford	40	3240	168	185	5100	P 36x8	DP36x8	Bud DW6	6-4 x 4 1/2	311.0	33.7	83-2100	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	38	
39	Garford	40	3240	168	185	5100	P 36x8	DP36x8	Bud BA-6	6-4 x 4 1/2	311.0	33.7	83-2100	L	CC	CC	2 1/2	12 1/2	4	CC	Ha	Zen	M	A-L	A-L	39	
40	(X) Gen. Mot.	T-19	870	130	164	10000	P 30x5	P 30x5	Own 200	6-3 1/2 x 4 1/2	200	28.9	60-3000	L	CC	CC	2 1/2	10 1/2	4	CC	Ha	Zen	M	A-L	A-L	40	
41	(X) Gen. Mot.	T-26	1415	130	164	11000	P 30x5	P 30x5	Own 257	6-3 1/2 x 4 1/2	257.5	28.3	76-2500	L	CC	CC	2 1/2	8 1/2	4	CC	Ha	Zen	M	A-L	A-L	41	
42	(X) Gen. Mot.	T-30	1605	141	164	12500	P 32x6	DP32x6	Bulk	6-3 1/2 x 4 1/2	257.5	28.3	76-2500	H	CC	CC	2 1/2	8 1/2	4	CC	Ha	Zen	M	A-L	A-L	42	
43	(X) Gen. Mot.	T-31	1785	141	181	14000	P 32x6	DP32x6	Bulk	6-3 1/2 x 4 1/2	257.5	28.3	76-2500	H	CC	CC	2 1/2	8 1/2	4	CC	Ha	Zen	M	A-L			

Line Number	Radiator Make	Clutch	Gear Set		Universal Make and No.	Rear Axle		Front Axle		Brakes		Frame		Body Mounting Data		Springs		Auxiliary Type	Line Number					
			Type and Make	Make and Model		Location	No. of Forward Speeds	Aux. Locat. and Speeds	Make and Model	Final Drive and Type	Drive and Torque	Reduc. in High	Reduc. in Low	Service	Area Service Brakes	Hand	Steering Gear Make			Dim. Side Rail	Type	Cap to Rear of Frame	Cap to Rear Axle	Width of Frame	Front	Rear
1	Per Fed	D.B-L	B-L 214	U	4	No	Spl	Tim	BF	R 5.83	36.3	Tim	L4IH	282	TX	Ros	6x2 1/2 x 1/2	P	116	76	34	42x2 1/2	54x3	1
2	Own D.B-L	P.B&B	War	U	4	No	Spl	Cla	BF	H 6.37	22.0	Sal	B4IM	...	TF	Ros	7 1/2 x 1	P	114 1/2	63 1/2	32	38 1/2 x 2 1/2	50x2 1/2	2
3	McC Lon	D.Ful	War-T9	U	4	No	Spl	Cle	Tim	H 6.37	44.4	Cla	B4IM	...	TX	Ros	7 1/2 x 2 1/2 x 1/2	P	114 1/2	63 1/2	32	38 1/2 x 2 1/2	50x3	3
4	Own P.Own	Own 5B	Own 8B	U	4	No	M.M.2	Own 7C	Spl	H 5.67	23.4	Own 7D	L4IH	276	...	Han	6x2 1/2 x 1/2	P	106 1/2	69 1/2	34	39x2 1/2	50x3	4
5	Own P.Own	Own 8B	Own 8B	U	4	No	M.M.2	Own 4CB	Spl	H 4.73	19.5	Own 4D	L4IH	349	TX	Han	6x2 1/2 x 1/2	P	112 1/2	58 1/2	34	39x2 1/2	50x3	5
6	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 7.4	41.0	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	6
7	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 7.4	41.0	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	7
8	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 5.28	28.3	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	8
9	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 6.0	32.1	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	9
10	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 6.0	32.1	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	10
11	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 6.0	32.1	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	11
12	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 6.0	32.1	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	12
13	Per D.B-L	B-L 35-4	B-L 35-4	U	4	No	Spl	Tim	BF	H 6.0	32.1	Tim 33000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	120	79 1/2	32	41x2 1/2	54x3	13
14	Per dp.Lon	Ful MLU	Ful MLU	U	4	No	Blo 3	Tim	BF	H 6.8	44.2	Shu 5427	L4IH	452	TD	Ros	6x3x 1/2	T	126	70	34	38x2 1/2	54x2 1/2	14
2 Ton—Cont'd																								
15	Per P.B&B	Cov W4C	Cov W4C	U	4	No	Spl	Tim	BF	H 7.40	43.3	Tim 33010H	L4IH	540	...	Ros	7x3 1/2 x 1/2	P	173	105	34	39x2 1/2	56x3	15
16	Per dp.Lon	Own T	Own T	U	4	No	Blo	Tim	BF	H 6.27	33.5	Tim 14703H	L4IH	552	TX	Ros	6x2 1/2 x 1/2	P	115 1/2	63 1/2	34	40x2 1/2	54x3	16
17	You D.B-L	B-L 314	B-L 314	U	4	No	Blo	Tim	BF	R 7.4	48.8	Tim 35000	L4IH	552	TX	Ros	6x2 1/2 x 1/2	P	115 1/2	63 1/2	34	40x2 1/2	54x3	17
18	You D.B-L	B-L 314	B-L 314	U	4	No	Blo	Tim	BF	R 7.4	48.8	Tim 35000	L4IH	552	TX	Ros	6x2 1/2 x 1/2	P	115 1/2	63 1/2	34	40x2 1/2	54x3	18
19	G&O D.B-L	B-L	B-L	U	4	No	Spl 3	Wls	BF	R 6.6	43.5	Col	L4IHV	386	CD	Ros	7 1/2 x 3x 1/2	P	108	69	34	40x2 1/2	54x3	19
20	Chl D.B-L	B-L 224	B-L 224	U	4	No	Spl	Tim	BF	R 6.8	42.0	Tim 31000H	L4IH	380	TX	Ros	7x4x 1/2	P	108	69	34	40x2 1/2	54x3	20
21	Per D.Ful	Ful GU14	Ful GU14	U	8	No	Spl	Wls	BF	R 8.05	15.4	Wls	L4IH	584	FD	Ros	10x2 1/2 x 1/2	P	108	78	30	48x3	48x3	21
22	Per D.Ful	Ful MGU	Ful MGU	U	5	No	Blo	Tim	BF	R 8.05	15.4	Tim 15733 H	L4IH	584	FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	22
23	Per D.Ful	Ful MGU	Ful MGU	U	5	No	Blo	Tim	BF	R 8.05	15.4	Tim 15733 H	L4IH	584	FX	Han	7x3 1/2 x 1/2	P	156	97 1/2	34	42x2 1/2	54x3	23
24	Per D.Jon	Cov W-4	Cov W-4	U	4	No	Blo	Wls	BF	H 5.2	31.7	Col 5500	L4IHV	339	FD	Ros	7x2 1/2 x 1/2	P	120	77 1/2	34	42x2 1/2	56x3	24
25	Per P.B-L	B-L 314	B-L 314	U	4	No	Spl 3	Tim	BF	H 6.16	40.7	Tim 33000H	L4IH	578	TX	Ros	7x4x 1/2	P	124 1/2	69	33 1/2	40x2 1/2	56x3	25
26	G&O P.B&B	Cov	Cov	U	4	No	Spl 3	Cla	BF	H 6.16	40.7	Cla F308	L4IHV	350	TD	Ros	6 1/2 x 3x 1/2	P	117	73 1/2	34	45 1/2 x 2 1/2	53x2 1/2	26
27	G&O P.B&B	Cov	Cov	U	4	No	Spl 3	Cla	BF	H 6.16	40.7	Cla F308	L4IHV	350	TD	Ros	6 1/2 x 3x 1/2	P	117	73 1/2	34	45 1/2 x 2 1/2	53x2 1/2	27
28	G&O D.Cov	Cov	Cov	U	4	No	Spl 3	Tim	BF	R 8.05	15.4	Tim 5582B	L4IH	408	TD	Ros	6 1/2 x 3x 1/2	P	135	81 1/2	34	45 1/2 x 2 1/2	56x3	28
29	Own D.Ful	Ful MGU14	Ful MGU14	U	4	No	Blo 3-4	Wls	BF	R 7.85	51.0	Shu 5550	W2IM	538	TX	Ros	6 1/2 x 3x 1/2	P	192	102	31	48x2 1/2	54x3	29
30	Own D.Ful	Ful MGU14	Ful MGU14	U	4	No	Blo 3-4	Wls	BF	R 7.85	51.0	Shu 5550	W2IM	538	TX	Ros	6 1/2 x 3x 1/2	P	192	102	31	48x2 1/2	54x3	30
31	Per P.B-L	B-L 314	B-L 314	U	4	No	Spl 3	Tim	BF	H 6.16	37.3	Tim 33020H	L4IH	578	TX	Ros	6 1/2 x 3x 1/2	P	167 1/2	97 1/2	34	41x2 1/2	56x3	31
32	Lon P.B&B	Own	Own	U	4	No	P-34	Tim	BF	H 8.00	42.8	Shu	K2M	460	TX	Ros	6x3 1/2 x 1/2	P	138	83	34	40x2 1/2	50x3	32
33	Lon P.B&B	Own	Own	U	4	No	P-34	Tim	BF	H 8.00	42.8	Shu	K2M	460	TX	Ros	6x3 1/2 x 1/2	P	138	83	34	40x2 1/2	50x3	33
34	Lon P.B&B	Own	Own	U	4	No	P-34	Tim	BF	H 8.00	42.8	Shu	K2M	460	TX	Ros	6x3 1/2 x 1/2	P	138	83	34	40x2 1/2	50x3	34
35	Lon P.B&B	Own	Own	U	4	No	P-34	Tim	BF	H 8.00	42.8	Shu	K2M	460	TX	Ros	6x3 1/2 x 1/2	P	138	83	34	40x2 1/2	50x3	35
36	Lon B-L	B-L 314	B-L 314	U	4	No	Spl 4	Tim	BF	R 7.53	38.5	Tim 31000H	L4IH	578	TX	Ros	6x3 1/2 x 1/2	P	130	86 1/2	32	40x2	54x3	36
37	Per D.B-L	B-L 55	B-L 55	U	7	R1	Blo 4	Own	BF	H 6.95	34.8	Tim 35000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	126	86	36	42x2 1/2	52x2 1/2	37
38	Lon D.Ful	Ful MGU	Ful MGU	U	4	No	Blo	Tim	BF	H 6.5	34.8	Tim 35000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	144	90	34	40x2 1/2	50x3	38
39	Lon D.Ful	Ful	Ful	U	5	No	Blo	Tim	BF	H 6.5	34.8	Tim 35000H	L4IH	578	TX	Ros	6x2 1/2 x 1/2	P	144	90	34	40x2 1/2	50x3	39
40	Lon P.Own	Own	Own	U	4	Op	Spl	Own	BF	H 6.2	40.7	Own	B4IM	377	TX	Jac	6x2 1/2 x 1/2	P	87	48	34	38x2	50 1/2 x 2 1/2	40
41	Lon D.Own	Own	Own	U	4	Op	Spl	Own	BF	H 6.2	40.7	Own	B4IM	377	TX	Jac	6x2 1/2 x 1/2	P	87	48	34	38x2	50 1/2 x 2 1/2	41
42	Lon D.Own	Own	Own	U	4	Op	Spl	Own	BF	H 6.2	40.7	Own	B4IM	377	TX	Jac	6x2 1/2 x 1/2	P	87	48	34	38x2	50 1/2 x 2 1/2	42
43	Lon D.Own	Own	Own	U	4	Op	Spl	Own	BF	H 6.2	40.7	Own	B4IM	377	TX	Jac	6x2 1/2 x 1/2	P	87	48	34	38x2	50 1/2 x 2 1/2	43
44	Lon D.Own	Own	Own	U	4	Op	Spl	Own	BF	H 6.2	40.7	Own	B4IM	377	TX	Jac	6x2 1/2 x 1/2	P	87	48	34	38x2	50 1/2 x 2 1/2	44
45	McC P.B-L	B-L 314	B-L 314	U	4	No	Spl	Tim	BF	H 6.16	40.7	Tim 33000H	L4IH	578	TX	Ros	7x3 1/2 x 1/2	P	120	77 1/2	34	42x2 1/2	56x3	45
46	Per D.Jon	Cov W-4	Cov W-4	U	4	No	Blo	Tim	BF	H 6.1	39.0	Tim 33000H	L4IHV	578	FD	Ros	7x2 1/2 x 1/							

Line Number	Make, Model and Capacity	General			Tire Size		Make and Model	Engine										Fuel System		Electrical System		Line Number					
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)		Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make		Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make	
3 Ton—Cont'd																											
1	Day-Elder.....160	2795	156	204	16000	6800	B 7.50/20	DB9.00/20	Con 18-R	6-4x4 1/2	339.3	38.4	82-2400	H	G	C	2 1/2	13 1/2	7	FP	Co	Zen	M	D-R	D-R	1	
2	Diamond T.....551B	2250	168	186	15500	6000	B 7.50/20	DB7.50/20	Her WXC	6-4x4 1/2	339.0	38.4	74-2400	L	G	C	2 1/2	13 1/2	7	FP	Co	Zen	M	A-L	A-L	2	
3	Diamond T.....504A	2650	166	208	17500	6350	B 8.25/20	DB8.25/20	Her WXC	6-4x4 1/2	339.0	38.4	74-2400	L	G	C	2 1/2	13 1/2	7	FP	Co	Zen	M	A-L	A-L	3	
4	Diamond T.....506A	2950	174	240	17500	6350	B 8.25/20	DB8.25/20	Her WXC	6-4x4 1/2	339.0	38.4	74-2400	L	G	C	2 1/2	13 1/2	7	FP	Co	Zen	M	A-L	A-L	4	
5	Diamond T 603-3.4Ton	3300	169	230	20000	7500	B 9.00/20	DB9.00/20	Her YXC	6-4x4 1/2	428.4	45.9	94-2200	L	G	C	3	15 1/2	7	FP	Co	Zen	M	A-L	A-L	5	
6	Diam'd T 606B-3.4Ton	3600	177	244	19000	7500	B 9.00/20	DB9.00/20	Her RXB	6-4x4 1/2	500.9	48.6	110-2200	L	G	C	3	12 1/2	7	FP	Co	Zen	M	A-L	A-L	6	
7	Dodge Bros.....	1515	135	135	12250	4235	P 32x6	DP32x6	Own	6-3x4 1/2	241.0	27.3	78-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	N-E	N-E	7	
8	Dodge Bros.....	1565	165	165	12220	4520	P 32x6	DP32x6	Own	6-3x4 1/2	241.0	27.3	78-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	N-E	N-E	8	
9	Dodge Bros.....	1615	185	185	12715	4715	P 32x6	DP32x6	Own	6-3x4 1/2	241.0	27.3	78-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	N-E	N-E	9	
10	Dodge Bros.....	F-60	2645	146	18979	5543	P 32x6	DP32x6	Own	6-3x4 1/2	309.6	31.5	96-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	D-R	D-R	10	
11	Dodge Bros.....	F-61	2695	195	19879	5901	P 32x6	DP32x6	Own	6-3x4 1/2	309.6	31.5	96-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	D-R	D-R	11	
12	Dodge Bros.....	F-62	2695	195	19879	5901	P 32x6	DP32x6	Own	6-3x4 1/2	309.6	31.5	96-3000	L	G	C	2 1/2	11 1/2	7	FP	Co	Zen	M	D-R	D-R	12	
13	Douglas.....D4	4010	186	Op	20000	6500	S 36x10	S 36x10	Bud YBU-I	4-4x4 1/2	381.0	32.4	50-1400	L	G	C	2 1/2	9 1/2	3	FP	Co	Zen	M	E-L	E-L	13	
14	Douglas.....D6	4430	186	Op	20000	6800	P 36x6	DP38x7	Bud BUS	6-4x5 1/2	386.4	38.4	78-2300	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	E-L	E-L	14	
15	Douglas.....D6 5p	5500	216	Op	22000	7560	P 38x7	DP40x8	Bud K428	6-4x5 1/2	411.0	40.8	83-2100	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	E-L	E-L	15	
16	Duplex.....FAC	4250	166	Op	16000	7200	S 34x5	S 36x8	Bud EBU-I	6-4x4 1/2	312.0	28.9	97-2100	L	G	C	2 1/2	10 1/2	3	FP	Co	Zen	M	E-L	E-L	16	
17	Duplex.....FAC	4750	166	Op	16000	7400	S 34x5	S 36x8	Bud K428	6-4x4 1/2	312.0	28.9	97-2100	L	G	C	2 1/2	10 1/2	3	FP	Co	Zen	M	E-L	E-L	17	
18	Fagel.....	300	125	196	19000	6550	P 34x7	DP34x7	Con 16R	6-4x4 1/2	311.0	38.4	75-2200	H	C	C	2 1/2	13 1/2	7	FP	Co	Zen	M	D-R	D-R	18	
19	Federal T10B 2 1/2-3 T	2740	165	201	18000	6550	P 34x7	DP34x7	Con 16R	6-4x4 1/2	311.0	38.4	75-2200	H	C	C	2 1/2	13 1/2	7	FP	Co	Zen	M	D-R	D-R	19	
20	Federal T10W 2 1/2-3 T	2915	165	201	18000	6550	P 34x7	DP34x7	Con 16R	6-4x4 1/2	311.0	38.4	75-2200	H	C	C	2 1/2	13 1/2	7	FP	Co	Zen	M	D-R	D-R	20	
21	Fisher-Std.....30A	160	160	160	16800	5600	P 34x7	DP34x7	Con 11R	6-3x4 1/2	291.9	35.0	64-2500	H	C	C	2 1/2	12 1/2	7	FP	Co	Zen	M	D-R	D-R	21	
22	Fisher-Std.....31A	160	160	160	16800	5600	P 34x7	DP34x7	Con 11R	6-3x4 1/2	291.9	35.0	64-2500	H	C	C	2 1/2	12 1/2	7	FP	Co	Zen	M	D-R	D-R	22	
23	F.W.D.....	4200	124	156	13960	4640	S 36x6	S 36x6	Own A	6-4x4 1/2	398.0	36.1	56-1350	T	G	C	2 1/2	10 1/2	3	FP	Co	Zen	M	G-R	G-R	23	
24	Garford.....	4080	175	192	17000	7100	P 36x6	DP38x7	Bud BA6	6-4x4 1/2	410.9	40.8	83-2100	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	24	
25	(X) Gen. Mot.....T-26	4500	130	168	11000	3905	P 32x6	DP32x6	Bud BA6	6-4x4 1/2	410.9	40.8	83-2100	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	25	
26	(X) Gen. Mot.....T-30	1740	141	164	12500	4705	P 32x6	DP32x6	Bulck	6-3x4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	FP	Co	Zen	M	A-L	A-L	26	
27	(X) Gen. Mot.....T-31	1840	141	181	14000	4635	P 32x6	P 36x8	Own 257	6-3x4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	FP	Co	Zen	M	A-L	A-L	27	
28	(X) Gen. Mot.....T-42	1960	141	181	15000	4905	P 36x6	DP36x6	Bulck	6-3x4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	FP	Co	Zen	M	A-L	A-L	28	
29	(X) Gen. Mot.....T-44	2050	141	181	16000	5005	P 36x6	DP36x6	Bulck	6-3x4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	FP	Co	Zen	M	A-L	A-L	29	
30	(X) Gen. Mot.....T-45	1995	141	181	16000	5065	B 7.50/20	DB7.50/20	Own 257	6-3x4 1/2	257.5	28.3	76-2500	H	G	C	2 1/2	8 1/2	4	FP	Co	Zen	M	A-L	A-L	30	
31	(U) Godfredson RFB6C	.....	.....	.....	20900	6100	B 9.00/20	DB9.00/20	Bud K381	6-4x4 1/2	381.0	40.8	95-2800	L	G	C	3	11 1/2	4	FP	Co	Zen	M	A-L	A-L	31
32	Godfredson.....RW6C	.....	.....	.....	20900	6300	B 9.00/20	DB9.00/20	Bud K381	6-4x4 1/2	381.0	40.8	95-2800	L	G	C	3	11 1/2	4	FP	Co	Zen	M	A-L	A-L	32
33	Gramm.....E-330	160	224	20000	5950	B 8.25/20	DB8.25/20	Lyc TS	6-3x4 1/2	353.8	36.2	98-2700	L	G	C	2 1/2	10 1/2	4	FP	Co	Zen	M	A-L	A-L	33		
34	Gramm.....EY-190	190	190	16000	6750	B 7.50/20	DB7.50/20	Con 20-R	Lyc TS	6-4x4 1/2	380.8	40.8	90-2200	H	G	C	2 1/2	13 1/2	7	FP	Co	Zen	M	A-L	A-L	34	
35	G-P 55-6, 3-4 Ton.....	2745	154	191	12500	5900	B 8.25/20	DB8.25/20	Lyc ASD	6-3x4 1/2	322.0	36.5	20-3200	L	G	C	2 1/2	11	5	PC	Mo	Str	M	A-L	A-L	35	
36	G-P 55-8, 3-4 Ton.....	2880	157	191	12500	5900	B 8.25/20	DB8.25/20	Lyc ASD	6-3x4 1/2	322.0	36.5	20-3200	L	G	C	2 1/2	11	5	PC	Mo	Str	M	A-L	A-L	36	
37	Hahn & Selden.....47B	151	151	15500	7200	P 34x7	DP34x7	Con 18R	Con 18R	6-4x4 1/2	339.2	38.4	82-2400	H	C	C	2 1/2	11	7	FP	Co	Zen	M	A-L	A-L	37	
38	Hendrickson.....198	3800	Op	Op	7000	B 9.00/20	DB9.00/20	Wau MK	Wau MK	6-4x4 1/2	380.9	40.8	87-2500	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	38	
39	Hug.....	125	125	16600	8160	P 34x7	DP34x7	Bud H298	Bud H298	6-3x4 1/2	298.2	33.7	86-2800	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	39	
40	Hug.....	150	150	15600	8200	P 34x7	DP34x7	Bud DW6	Bud DW6	6-3x4 1/2	330.0	33.7	70-2100	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	40	
41	Hug.....	166	201	14500	6500	B 8.25/20	DB8.25/20	Bud H298	Bud H298	6-3x4 1/2	298.2	33.7	86-2800	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	41	
42	Hug.....	114	114	17200	8380	P 34x7	DP34x7	Bud DW6	Bud DW6	6-3x4 1/2	330.0	33.7	70-2100	L	G	C	2 1/2	9 1/2	4	FP	Co	Zen	M	A-L	A-L	42	
43	Hug.....	114	114																								

Line Number	Make, Model and Capacity	General		Tire Size		Make and Model	Engine										Fuel System		Electrical System		Line Number					
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)		Chassis Wt. (Stripped)	Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System		Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make
3½ Ton—Cont'd																										
1	(X) Gen. Mot. T-31	1845	141	181	14000	4695	P 32x6	DP32x6	Ow 257	6-3½x4½	257.5	28.3	76-2500	H G C C C	G C C C C	3½	8½	4	PC	Ha	Mar	M	D-R	D-R	1	
2	(X) Gen. Mot. T-42	1960	141	181	15000	4905	P 36x6	DP36x6	Bulck	6-3½x4½	257.5	28.3	76-2500	H G C C C	G C C C C	3½	8½	4	PC	Ha	Mar	M	D-R	D-R	2	
3	(X) Gen. Mot. T-44	2050	141	181	16000	5005	P 36x6	DP36x6	Bulck	6-3½x4½	257.5	28.3	76-2500	H G C C C	G C C C C	3½	8½	4	PC	Ha	Mar	M	D-R	D-R	3	
4	(X) Gen. Mot. T-45	1990	141	181	16000	5050	P 32x6	DP32x6	Ow 257	6-3½x4½	257.5	28.3	76-2500	H G C C C	G C C C C	3½	8½	4	PC	Ha	Mar	M	D-R	D-R	4	
5	Gottfredson, RW 76A	.....	.....	.....	21900	7500	B 9.75/20	DB 9.75/20	Bud K428	6-4½x4½	428.0	45.9	100-2400	L G C C C	G C C C C	3½	11½	7	FP	Ha	Zen	M	D-R	D-R	5
6	Gottfredson, RD 76A	.....	.....	.....	21900	7500	B 9.75/20	DB 9.75/20	Bud K428	6-4½x4½	428.0	45.9	100-2400	L G C C C	G C C C C	3½	11½	7	FP	Ha	Zen	M	D-R	D-R	6
7	G-P 6-56, 3½-5	3325	158	195	15000	7100	B 9.00/20	DB 9.00/20	Lyc TS	6-3½x5	353.0	36.5	97-2750	L G C C C	G C C C C	3½	10	4	PC	Mo	Str	M	A-L	A-L	7	
8	G-P 6-58, 3½-5	3485	158	195	15000	7200	B 9.00/20	DB 9.00/20	Lyc AEC	6-3½x5	420.0	45.0	140-3000	L G C C C	G C C C C	3½	11½	5	PC	Mo	Str	M	A-L	A-L	8	
9	(V) Hug. C87, 87M	.....	.....	.....	21800	.....	P 36x8	DP36x8	Bud DW6	6-3½x4½	330.0	33.7	70-2100	L G C C C	G C C C C	3½	11½	4	PC	Bu	Zen	V	R-Bo	D-R	9
10	Hug. C87, 87M	.....	.....	.....	21800	.....	P 36x8	DP36x8	Bud DW6	6-3½x4½	330.0	33.7	70-2100	L G C C C	G C C C C	3½	11½	4	PC	Bu	Zen	V	R-Bo	D-R	10
11	Indiana 3-4T, 195	160	205	.....	19500	7500	P 34x7	DP34x7	Con	6-4½x4½	380.9	40.8	89-2400	H C C C C	G C C C C	3½	13½	7	CC	KP	Zen	M	A-L	A-L	11
12	International W2	3900	148	200	.....	8400	S 36x5	S36x10	Has 151	6-4½x4½	312	28.9	59-1800	H C C C C	G C C C C	3½	8½	3	PC	HS	Zen	U	R-Bo	D-R	12
13	Kenworth 166B, 3½-4	3850	.....	.....	.....	.....	B 9.00/20	DB 9.00/20	Bud K393	6-4½x4½	393	42.1	103-2600	L G C C C	G C C C C	3½	11½	7	FP	No	Zen	M	D-R	D-R	13
14	Kenworth 166A, 3½-4	4330	.....	.....	.....	.....	B 9.00/20	DB 9.00/20	Has 147	6-4x5	377	38.4	89-2300	H C C C C	G C C C C	3½	11½	4	FP	No	Zen	M	D-R	D-R	14
15	Kielber 210	190	192	21000	.....	7100	B 9.00/20	DB 9.00/20	Con 20R	6-4½x4½	380.9	40.8	89-2400	H C C C C	G C C C C	3½	13½	7	CC	No	Str	M	D-R	D-R	15
16	Larrabee 65	4280	166	204	18400	7200	B 8.25/20	DB 8.25/20	Con 18R	6-4x4½	339.3	38.4	82-2400	L G C C C	G C C C C	3½	13½	7	FP	No	Str	M	D-R	D-R	16	
17	Moreland 2½T, B13, 15	1850	181	2100	.....	6315	B 8.25/20	DB 8.25/20	Her WXC	6-4½x4½	411.0	40.8	89-2400	L G C C C	G C C C C	3½	13½	7	FP	No	Str	M	D-R	D-R	17
18	Netco F4500	140	200	18500	.....	7500	B 9.75/20	B 9.75/20	Wau 6SRL	6-4½x4½	462	45.9	100-2400	L G C C C	G C C C C	3½	13½	7	FP	Wa	Zen	M	A-L	A-L	18
19	Omo 35	150	150	21000	.....	7600	P 36x8	DP36x8	Her WXC	6-4x4½	339	38.4	73-2000	L G C C C	G C C C C	3½	13½	7	PC	No	Zen	M	A-L	A-L	19
20	Oshkosh HC 5150	146	165	18500	.....	8200	B 10.50/20	B 10.50/20	Her XWC	6-4½x4½	428.4	45.9	90-2000	L G C C C	G C C C C	3½	15	7	PC	Ha	Zen	M	R-Bo	L-N	20
21	Relay 60DC	4745	175	192	.....	7800	P 38x7	DP40x8	Bud BA 6	6-4½x5½	410.0	40.8	83-2100	L G C C C	G C C C C	3½	9½	4	PC	Bu	Zen	V	A-L	A-L	21
22	Relay 80	5330	175	192	.....	8600	P 36x6	S 40x12	Bud BA 6	6-4½x5½	411.0	40.8	83-2100	L G C C C	G C C C C	3½	9½	4	PC	Bu	Zen	V	A-L	A-L	22
23	Schacht 28H, 3½-8	146	227	.....	.....	6900	B 9.00/20	DB 9.00/20	Her WXC	6-4x4½	339.0	38.4	73-2200	L G C C C	G C C C C	3½	13½	7	FP	No	Str	M	D-R	D-R	23
24	Service 3-4T, 195	3795	184	212	.....	8200	P 36x8	S 36x12	Bud BA 6	6-4½x4½	411.0	40.8	89-2400	L G C C C	G C C C C	3½	13½	7	FP	No	Str	M	D-R	D-R	24
25	Sterling FW97, FD97	4225	192	222	.....	7550	P 36x8	DP36x8	Wau MK	6-4½x4½	381	40.8	85-2500	L G C C C	G C C C C	3½	12½	7	CC	Wa	Zen	M	D-R	D-R	25
26	Sterling FW97S, FD97S	4490	192	222	.....	8200	P 36x8	DP36x8	Wau SRL	6-4½x5½	462	45.9	102-2400	L G C C C	G C C C C	3½	13½	7	CC	Wa	Zen	M	D-R	D-R	26
27	Sterling FC100	192	222	.....	.....	7750	P 36x8	DP36x8	Wau MK	6-4½x4½	381	40.8	85-2500	L G C C C	G C C C C	3½	12½	7	CC	Wa	Zen	M	D-R	D-R	27
28	Stewart 19X	3690	165	235	.....	7110	B 9.00/20	DB 9.00/20	Lyc TS	6-3½x5	354.0	36.2	90-2750	L G C C C	G C C C C	3½	10	4	FP	Ha	Str	V	D-R	D-R	28
29	Stewart 38-6	3990	170	241	.....	7600	B 9.00/20	DB 9.00/20	Wau 6SRL	6-4½x5½	462	45.9	100-2000	L G C C C	G C C C C	3½	12½	7	FP	Ha	Str	V	D-R	D-R	29
30	Stewart 38-8	3990	170	241	.....	7600	B 9.00/20	DB 9.00/20	Lyc AE	6-3½x4½	420.0	44.4	130-2800	L G C C C	G C C C C	3½	13½	5	PC	No	Str	M	D-R	D-R	30
31	Studebaker 99	5500	120	.....	17000	5400	B 9.00/20	DB 9.00/20	Ow 6SRL	6-4½x5½	462	46.0	100-1800	L G C C C	G C C C C	3½	13½	7	FP	Ow	Zen	P	D-R	D-R	31
32	Walter 3-4T, 195	170	224	.....	.....	7500	B 9.00/20	DB 9.00/20	Ow 6SRL	6-4½x5½	462	46.0	100-1800	L G C C C	G C C C C	3½	13½	7	FP	Ow	Zen	P	D-R	D-R	32
33	Ward LaFrance 30B18	197	209	18000	.....	.....	B 9.00/20	DB 9.00/20	Ow	6-3½x4½	322	36.4	100-2400	L G C C C	G C C C C	3½	10½	7	FP	Ha	Str	P	D-R	D-R	33
34	Ward LaFrance 30B18	197	209	18000	.....	.....	B 9.00/20	DB 9.00/20	Ow 6MK	6-3½x4½	381	40.8	83-2200	L G C C C	G C C C C	3½	12½	7	FP	Ha	Str	P	D-R	D-R	34
35	Ward LaFrance 30B21	.....	.....	21000	.....	.....	B 9.00/22	DB 9.00/22	Ow	6-3½x4½	322	36.4	100-2400	L G C C C	G C C C C	3½	10½	7	FP	Ha	Str	P	D-R	D-R	35
36	Ward LaFrance 30R21	.....	.....	21000	.....	.....	B 9.00/22	DB 9.00/22	Ow 6MK	6-4½x4½	381	40.8	83-2200	L G C C C	G C C C C	3½	12½	7	FP	Ha	Str	P	D-R	D-R	36
37	White 631	5750	168	215	24000	9000	B 9.25/20	DB 9.25/20	Ow 3AD	6-4x5½	396	38.4	82-1800	H C C C C	G C C C C	3½	13½	7	FP	Ow	Zen	M	D-R	D-R	37	
38	White 641-3½	4950	173	Op	20000	8700	B 9.75/20	DB 9.75/20	Her XWC	6-4½x4½	383	43.3	84-2200	L G C C C	G C C C C	3½	13½	7	FP	Ow	Zen	M	D-R	D-R	38	
39	Wichita 8-103	159	.....	15500	.....	8103	P 34x7	DP36x8	Wau SRL	6-4½x5½	462	46.0	97-2000	L G C C C	G C C C C	3½	13½	7	CC	Wa	Str	M	D-R	D-R	39
40	Witt-Will R3B	159	.....	15500	.....	6800	B 9.00/20	DB 9.00/20	Con 18R	6-4x4½	339.2	38.4	82-2400	H C C C C	G C C C C	3½	13½	7	FP	No	Zen	M	D-R	D-R	40
41	Witt-Will R35	4200	159	.....	16800	6800	B 9.00/20	DB 9.00/20	Con 18R	6-4x4½	339.2	38.4	82-2400	H C C C C	G C C C C	3½	13½	7	FP	No	Zen	M	D-R	D-R	41
42	Woods 53B	3995	190	Op	.....	6200	B 8.25/20	DB 8.25/20	Her WXC	6-4½x4½	383	43.3	84-2200	L G C C C	G C C C C	3½	13½	7	PC	Ha	Str	M	A-L	A-L	42
43	Woods 53W	4595	190	Op	.....	6675	B 9.00/20	DB 9.00/20	Her WXC	6-4½x4½	383	43.3	84-2200	L G C C C	G C C C C	3½	13½	7	PC	Ha	Str	M	A-L	A-L	43
4 Ton																										
44	Aerne 8X	192	Op	19000	.....	7300	B 9.75/20	DB 9.75/20	Con 20R	6-4½x4½	381	40.8	89-2400	H C C C C	G C C C C	3½									

Line Number	Make, Model and Capacity	General		Tire Size		Engine										Fuel System	Electrical System	Line Number									
		Chassis Price	Standard W.B.	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)	Front	Rear	Make and Model	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings		No. Main Bearings	Oiling System	Governor Make	Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make		
4½ Ton—Cont'd																											
1	Schacht... 35H & 6½	146	227	Op	24000	7700	B 9.00/20	DB9.00/20	Her WXC2	6-4½x4½	360.8	40.3	80-2200	L	G	C	2½	13½	13½	7	PC	Mo	Zen	P	A-L	A-L	1
2	Ward La France 45D	Op	Op	Op	24000	8600	P 36x8	DP36x8	Wau SRL	6-4½x5½	462	45.9	97-2000	L	G	C	3	13½	13½	7	PC	Wa	Zen	P	A-L	A-L	2
5 Ton																											
4	Acme... 10X Spec	192	Op	Op	23500	9400	B10.50/20	DB10.50/20	Con 21R	6-4½x4½	428.4	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	Ha	Str	M	A-L	A-L	3
5	Acme... 10X	194	Op	Op	23500	9600	B10.50/20	DB10.50/20	Con 15H	6-4½x5½	548.6	48.6	105-2000	L	G	C	3	13½	13½	7	PC	Ha	Str	M	A-L	A-L	4
6	Am. LaF. Big Ch. 16	6725	226	242	24000	10000	P 40x8	DP40x8	Own	6-4½x6	572.5	48.6	115-1600	L	G	C	3	14½	14½	7	PC	Ha	Str	M	A-L	A-L	5
7	Armstrong... 61	Op	199	Op	19420	6700	P 36x8	DP36x8	Her WXC2	6-4½x5½	360	40.8	80-2200	L	G	C	2½	13½	13½	7	PC	Ha	Str	M	A-L	A-L	6
8	Atterbury... 100	223	337	Op	28000	9100	B10.50/20	DB10.50/20	Con 21R	6-4½x5½	428.4	45.9	101-2400	H	G	C	2½	14½	14½	7	PC	Ha	Str	M	A-L	A-L	7
9	Autocar 3½ & 5T	5500	172	186	28000	9705	P 42x9	DP42x9	Own	6-4½x5½	453	48.6	101-2400	L	G	C	3	14½	14½	7	PC	Pe	Str	V	D-R	L-N	8
10	Autocar... TFA	6100	192	242	28000	9430	P 38x9	DP38x9	Own	6-4½x5½	453	48.6	101-2400	L	G	C	3	14½	14½	7	PC	Pe	Str	V	D-R	L-N	9
11	Available... T-50	Op	Op	Op	33000	9800	B 9.75/20	DB9.75/20	Wau 6RB	6-5x5½	677.4	60.0	125-1900	L	G	C	3	11½	11½	4	CC	Wa	Str	M	A-L	A-L	10
12	Brockway... 4-5T-220	Op	224	224	22000	8400	P 40x8	DP40x8	Con	6-4½x5½	427.5	45.9	100-2400	H	G	C	2½	13½	13½	7	PC	Ha	Str	M	A-L	A-L	11
13	Chicago... 1-50-B	140	236	18780	7780	B 9.75/20	DB9.75/20	Wau 6SRL	6-4½x5½	462	45.9	97-2000	L	G	C	3	13½	13½	7	PC	Ha	Str	M	A-L	A-L	12	
14	Clinton... 120L	5500	204	Op	27050	9550	P 36x6	DS40x7	Bud BTU	4-5x6½	510.5	40.0	61-1400	L	G	C	2½	12½	12½	3	PC	Bu	Zen	V	Spl	A-Bo	13
15	Clinton... 120L	5500	204	Op	27150	9650	S 36x6	DS40x7	Bud BTU	4-5x6½	510.5	40.0	61-1400	L	G	C	2½	12½	12½	3	PC	Bu	Zen	V	Spl	A-Bo	14
16	Coleman X-100 5-6 T	144	184	24300	11200	P 42x9	P 42x9	Bud BA6	6-4½x5½	411	40.8	105-2200	L	G	C	3	9½	9½	4	PC	Bu	Str	V	D-R	A-R	15	
17	Coleman X-100F 5-7½	144	184	24300	11300	B10.50/24	B 10.50/24	Bud GF-6	6-4½x6	638	54.1	126-1850	L	G	C	3	10½	10½	4	PC	Bu	Str	V	D-R	A-R	16	
18	Commerce... 100	5830	175	192	24000	9600	S 36x6	S 40x14	Bud BA6	6-4½x5½	611.4	40.8	83-2100	L	G	C	2½	9½	9½	4	PC	Bu	Str	V	A-L	A-L	17
19	Condor... CHB	157	240	24000	10100	B 9.00/20	DB9.00/20	Con 16H	6-4½x5½	428	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	No	Zen	M	A-L	A-L	18	
20	Condor... CGW	157	240	24000	10100	B 9.00/20	DB9.00/20	Con 21R	6-4½x5½	428	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	No	Zen	M	A-L	A-L	19	
21	Day Elder... 24	4295	162	202	24000	9500	P 38x9	DP38x9	Con 21R	6-4½x5½	381	40.8	88-2400	H	G	C	2½	13½	13½	7	PC	No	Zen	O	D-R	D-R	20
22	Diamond T... 750	4650	178	238	24000	9000	B 9.75/22	DB9.75/22	Her RXC	6-4½x5½	529.0	51.3	124-2200	L	G	C	3	12½	12½	3	PC	Ha	Str	M	A-L	A-L	21
23	Douglas... F4	5500	185	Op	26000	9200	S 36x6	S 40x12	Bud BBU	4-5x6½	510.5	40.0	61-1400	L	G	C	2½	12½	12½	3	PC	Ha	Str	M	A-L	A-L	22
24	Douglas... F6	6300	196	Op	26000	9200	B 9.75/38	DB9.75/38	Bud GL6	6-4½x6	572.5	48.6	114-1900	L	G	C	3	10½	10½	4	PC	Bu	Str	E	L-N	L-N	23
25	Duplex... M 5-7 Ton	7600	Op	Op	28000	10000	P 34x7	DS36x7	Bud GL6	6-4½x6	572.5	48.6	105-2200	L	G	C	3	10½	10½	4	PC	Str	V	A-L	A-L	24	
26	Federal... C7 5-6T	1485	195	249	24000	9350	B9.75/20	DB9.75/20	Con 21R	6-4½x5½	428.0	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	KP	Zen	M	D-R	D-R	25
27	Federal... CS 5-6T	4895	195	249	24000	9450	B9.75/20	DB9.75/20	Con 21R	6-4½x5½	428.0	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	KP	Zen	M	D-R	D-R	26
28	Fisher-Stid... 100A	168	216	24000	8300	P 36x8	DP36x8	Con 21R	6-4½x5½	427.5	45.9	102-2400	H	G	C	2½	13½	13½	7	PC	Ha	Str	M	A-L	A-L	27	
29	Fisher-Standard... 105A	168	216	24000	8400	P 38x9	DP38x9	Con 21R	6-4½x5½	427.5	45.9	102-2400	H	G	C	2½	13½	13½	7	PC	Ha	Str	M	A-L	A-L	28	
30	F.W.D... M5	7600	165	195	24000	11800	B12.75/20	B12.75/20	WauSRK	6-4½x5½	517	51.3	101-2300	L	G	C	3	13½	13½	7	PC	Wa	Zen	M	E-N	E-N	29
31	F.W.D... MF6-5T	148	Op	Op	24000	9300	B10.50/20	DB10.50/20	Wau AB	6-4½x5½	549.0	48.6	98-2000	L	G	C	3½	11½	11½	4	PC	Wa	Zen	M	E-N	E-N	30
32	F.W.D... LBU-5T	148	Op	Op	24000	9000	B 9.00/20	DB9.00/20	Wau SRS	6-4½x5½	411.0	40.8	91-2300	L	G	C	3	13½	13½	7	PC	Wa	Zen	M	R-Bo	E-N	31
33	Garford... 100	5830	175	192	24000	9600	P 36x6	S 40x14	Bud BA6	6-4½x5½	611.4	40.8	83-2100	L	G	C	2½	9½	9½	4	PC	Bu	Zen	V	A-L	A-L	32
34	(X) Gen. Mot... T51	2565	155	200	19000	5855	P 34x7	DP34x7	Own 331	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	33
35	(X) Gen. Mot... T55	2690	155	200	19000	6095	P 34x7	DP34x7	Own 331	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	34
36	(X) Gen. Mot... T60	3160	154	200	22000	7065	P 36x6	DP36x8	Buick	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	35
37	(X) Gen. Mot... T61	3445	154	200	22000	6965	B 9.00/20	DB9.00/20	Own 331	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	36
38	(X) Gen. Mot... T82	3935	155	201	24000	7750	P 36x8	DP36x8	Own 331	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	37
39	(X) Gen. Mot... T83	3935	155	201	24000	7670	B9.00/20	DB9.00/20	Own 331	6-3½x5	331.4	33.7	94-2500	H	G	C	2½	8½	8½	4	PC	Ha	Str	M	A-L	A-L	38
40	Gotfredson... RW 56A	157	240	24000	9500	B 9.00/20	DB9.00/20	Her YXC3	6-4½x5½	478.8	51.2	105-2200	L	G	C	3	13½	13½	7	PC	Pe	Str	M	A-L	A-L	39	
41	Gramm... HV 5	210	236	22000	10100	B 9.00/20	DB9.00/20	Con 21R	6-4½x5½	427.5	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	No	Zen	M	A-L	A-L	40	
42	Gramm... HV 5	210	236	22000	10100	B 9.00/20	DB9.00/20	Con 21R	6-4½x5½	427.5	45.9	100-2200	H	G	C	2½	13½	13½	7	PC	No	Zen	M	A-L	A-L	41	
43	Hahn & Selden... 67	151	184	23500	8700	P 36x8	DP36x8	Con 21R	6-4½x5½	27.5	45.9	100-2400	H	G	C	2½	9½	9½	4	PC	No	Zen	V	A-L	A-L	42	
44	Hug... C97	197	213	26000	11000	P 38x9	DP38x9	Bud BA6	6-4½x5½	411.0	40.8	83-2100	L	G	C	2½	9½	9½	4	PC	Bu	Zen	M	R-Bo	A-L	43	
45	Indiana... 4-5T-220	170	224	22000	8400	P 40x8	DP40x8	Con	6-4½x5½	427.5	45.9	100-2400															

Line Number	Radiators Make	Clutch	Gear Set	Type and Make	Make and Model	Location	No. of Forward Speeds	Aux. Locat. and Speeds	Universals Make and No.	Rear Axle			Front Axle			Brakes	Frame			Body Mounting Data			Springs			Auxiliary Type	Line Number
										Final Drive and Type	Drive and Torque	Gear Ratios	Final Drive and Type	Drive and Torque	Gear Ratios		Type	Dim. Side Rail	Type	Cab to Rear of Frame	Cab to Rear Axle	Width of Frame	Front	Rear			
																									Reduc. in High		
1	You	D.Ful	Ful MG U	U	4	No	4	No	Opt	Own	2F	R 8.00	52.0	Shu 5572	L41HV	893	TD	Ros	8 1/4 x 3 1/4	P	Opt	Opt	Opt	4 1/2 Ton—Cont'd	1		
2	Own	P.B-L	B-L 615	A	4	Opt	4	Opt	Spl	Tim	WF	R 8.00	52.0	Shu 615	T21MV	893	TD	Ros	7 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	2		
5 Ton																											
3	Per	B-L	B-L 60-7	A	4	No	4	No	Spl	Tim	WF	R 9.0	85.5	Tim 26050H	L41D	876	TD	Ros	9 3/4 x 3 1/4	P	168	108 1/2	34	44x3	54x3 1/2	3	
4	Own	P.B-L	B-L 60-7	A	4	No	4	No	Spl	Tim	WF	R 9.0	85.5	Tim 26050H	L41D	876	TD	Ros	9 3/4 x 3 1/4	P	168	108 1/2	34	44x3	54x3 1/2	4	
5	Own	D-Ful	Ful MG U	U	4	No	4	No	Spl	Tim	WF	R 8.5	55.2	Shu 5572	L41HV	793	C	Ros	8 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	5		
6	Per	D-B-L	B-L 55-7	A	4	No	4	No	Spl	Tim	WF	R 9.0	85.5	Tim 26450H	L41H	864	TD	Ros	9 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	6		
7	Own	dp.Lon	Own B	U	4	Op	4	Op	Spl	Own	2F	H 8.5	57.2	Own CL	O21M	502	TD	Ros	9 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	7		
8	Own	dp.Lon	Own B	U	4	Op	4	Op	Spl	Own	2F	H 8.5	57.2	Own CL	O21M	502	TD	Ros	9 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	8		
9	Own	dp.Lon	Own B	U	4	Op	4	Op	Spl	Own	2F	H 8.5	57.2	Own CL	O21M	502	TD	Ros	9 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	9		
10	You	D-B-L	B-L 714-703	A	4	No	4	No	Spl	Tim	WF	R 9.0	90.0	Tim 26450W	W241M	890	TD	Ros	7 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	10		
11	G&O	D-B-L	B-L	U	4	No	4	No	Spl	Tim	WF	R 9.0	90.0	Tim 26450W	W241M	890	TD	Ros	7 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	11		
12	Chi	D-B-L	B-L 60 Max	A	4	No	4	No	Spl	Tim	WF	R 7.5	73.6	Tim 26450H	L21H	495	TD	Ros	6 3/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	12		
13	Own	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.0	80.4	Tim 17300	T21H	288	RI	Ros	10 1/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	13		
14	Own	D-B-L	B-L 60 Max	A	4	No	4	No	Spl	Tim	WF	R 8.0	80.4	Tim 17300	T21H	288	RI	Ros	10 1/4 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	14		
15	R-T	D-Ful	Ful R U 16	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	15		
16	Per	D-Ful	Ful H U 16	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	16		
17	Lon	D-B-L	B-L 60 Max	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	17		
18	Per	D-Ful	Ful HU 16	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	18		
19	Per	D-Jon	Cov Rus	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	19		
20	Per	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	20		
21	Per	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	21		
22	G&O	D-Ful	Ful HU 18	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	22		
23	Own	D-Ful	Ful HU 18	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	23		
24	Own	D-Ful	Ful HU 18	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	24		
25	Mod	D-B-L	B-L 70	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	25		
26	Lon	P.B&B	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	26		
27	Lon	P.B&B	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	27		
28	Lon	P.B&B	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	28		
29	Lon	P.B&B	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	29		
30	Per	D-B-L	B-L 714	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	30		
31	Per	D-B-L	B-L 714	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	31		
32	Per	D-B-L	B-L 714	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	32		
33	Lon	D-B-L	B-L 60 Max	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	33		
34	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	34		
35	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	35		
36	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	36		
37	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	37		
38	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	38		
39	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	39		
40	Lon	D-B-L	B-L 60	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	40		
41	Per	D-B-L	B-L 714	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	41		
42	Per	D-B-L	B-L 714	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	42		
43	Chi	D-B-L	B-L 55	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	43		
44	You	D-B-L	B-L 555	A	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	44		
45	G&O	D-B-L	B-L	U	4	No	4	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	45		
46	Own	P-Own	Own	U	5	No	5	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2 x 3 1/4	C	Opt	Opt	Opt	40x2 1/2	46		
47	Mod	P-Roc	Own	U	5	No	5	No	Spl	Tim	WF	R 8.5	54.1	Wis 122F	W241M	890	TD	Ros	14 1/2								

Line Number	Make, Model and Capacity	General			Tire Size		Make and Model	Engine										Fuel System		Electrical System		Line Number				
		Chassis Price	Standard W.B.	Max. W.B. Furnished	Gross Vehicle Wt. (See Key Note)	Chassis Wt. (Stripped)		Front	Rear	Number of Cylinders Bore and Stroke	Piston Displacement	N.A.C.C. Rated H.P.	Max. Brake H.P. at Specified R.P.M.	Valve Arrangement	Camshaft Drive	Piston Material	Dia. Main Bearings	Length Main Bearings	No. Main Bearings	Oiling System	Governor Make		Carburetor Make	Fuel Feed	Ignition System Make	Generator, Starter Make
5½ Ton and More—Cont'd																										
1	Kenworth 241	5450					B 9.75/20	DB9.75/20	Her RXB	6-4½x5½	501	48.6	110-2200	L	GCC	GCC	3	12½	7	CC	Ha	Zen	M	D-R	D-R	1
2	Kenworth 241B	6500					B 9.75/20	DB9.75/20	Has 160	6-4½x5½	468	43.3	120-2400	L	GCC	GCC	3	10½	4	FP	No	Zen	M	D-R	D-R	2
3	Kenworth 241B	6150					B 9.75/20	DB9.75/20	Bud GI-6	6-4½x6	572.5	48.6	114-1900	L	GCC	GCC	3	10½	4	CC	Wa	Zen	M	D-R	D-R	3
4	Kenworth 241C	7200					B 9.75/20	DB9.75/20	Has 175	6-5x6	706.8	60.0	159-2000	H	GCC	GCC	3	11½	7	FP	No	Zen	M	D-R	D-R	4
5	La Fran.-Republic 35-2		174	198	24000	9250	P 38x9	DP38x9	Wau 6AB	6-4½x5½	549.0	48.6	98-1850	L	GCC	GCC	3	11½	4	PC	Wa	Zen	M	A-L	A-L	5
6	La Fran.-Republic 35-3		191	204	28000		B 10.50/24	DB10.50/24	Wau 6SRK	6-4½x5½	517	51	100-1800	L	GCC	GCC	3	13½	7	PC	Wa	Zen	M	A-L	A-L	6
7	La Fran.-Republic 35-4		260	30000	12750		B 10.50/24	DB10.50/24	Alfco 312-B	12-4x5	754.0	76.7	240-2900	H	GCC	GCC	3	10	4	PC	No	Zen	M	D-R	D-R	7
8	Mack AC	5500	156	240			S 36x6	DS40x6	Own AC	4-5x6	471.2	40.0	77-1800	L	GCC	GCC	3	10½	4	PS	On	Str	V	R-Bo	N-E	8
9	Mack AC	6550	174	240			B10.50/24	DB10.50/24	Own BK	6-4½x5½	525.5	48.6	126-2200	L	GCC	GCC	3	10½	4	PS	On	Str	V	R-Bo	N-E	9
10	Mack AC	6000	156	240			S 36x7	DS40x7	Own AC	4-5x6	471.2	40.0	77-1800	L	GCC	GCC	3	10½	4	PS	On	Str	V	R-Bo	N-E	10
11	Mack AP	9500	191	191			S 36x7	DS40x8	Own AP	6-5x6	706.5	60.0	150-2000	L	GCC	GCC	3	11½	7	FP	No	Str	V	R-Bo	N-E	11
12	Netco K	6500	180	220	32000	11000	B10.50/40	DB10.50/40	Lyc AEC	8-3½x4¼	420	140	140-2800	L	GCC	GCC	3	12	5	FP	Ha	Zen	M	A-L	A-L	12
13	Pierce-Arrow FZ	168	204	34000	12800		S 36x7	DS40x8	Own	6-4½x5½	611	54.1	130-2000	L	GCC	GCC	3	16½	7	FP	Ha	Zen	M	D-R	D-R	13
14	Relay 100B, 7½ Ton	6900	220	29200	11200		B 9.75/24	DB9.75/24	Buda GF6	6-4½x6	638	54.1	118-1850	L	GCC	GCC	3	10½	4	PC	Ha	Zen	M	A-L	A-L	14
15	Schacht 40HA	154	235		8200		B 9.75/24	DB9.75/24	Her YXC	6-4½x4¼	428.4	45.9	93-2200	L	GCC	GCC	3	15	7	PC	Mo	Zen	G	A-L	A-L	15
16	Schacht 40HB	154	235		8250		B 10.50/20	DB10.50/20	Her YXC	6-4½x4¼	428.4	45.9	93-2200	L	GCC	GCC	3	15	7	PC	Mo	Zen	G	A-L	A-L	16
17	Schacht 66H	152	247		10300		B 10.50/20	DB10.50/20	Her YXC	6-4½x5½	528.0	51.2	115-2200	L	GCC	GCC	3	15	7	PC	Mo	Zen	G	A-L	A-L	17
18	Schacht 66HA	152	247		10350		B 10.50/24	DB10.50/24	Her YXC	6-4½x5½	528.0	51.2	115-2200	L	GCC	GCC	3	15	7	PC	Mo	Zen	G	A-L	A-L	18
19	Service 1002B	5830	175		9600		S 36x6	S 40x14	Bud BA6	6-4½x5½	410.9	40.8	83-2100	L	GCC	GCC	3	9	4	PC	Bu	Zen	M	A-L	A-L	19
20	Standard 5-7	165	180		8700		S 36x6	S 40x14	Con B5	4-4½x6	425.3	36.1		L	GCC	GCC	3		3	FP	Si	Str	V	Eis	ABO	20
21	Sterling FW140, FD140	192	222		10050		P 40x8	DP42x9	Wau SRL	6-4½x5½	462	45.9	102-2400	L	GCC	GCC	3	13½	7	CC	Wa	Zen	M	D-R	D-R	21
22	Sterling FC135	192	222		8900		P 40x8	DP40x8	Wau SRL	6-4½x5½	462	45.9	102-2400	L	GCC	GCC	3	13½	7	CC	Wa	Zen	M	D-R	D-R	22
23	Sterling FC140, 6 7½	200	230		9350		P 40x8	DP40x8	Wau HB	6-4½x5½	489	43.4	90-2000	L	GCC	GCC	3	11½	4	CC	Wa	Zen	M	D-R	D-R	23
24	Sterling FC145-6, 7½	200	230		10100		P 40x8	DP40x8	Wau AB	6-4½x5½	549	48.6	99-2000	L	GCC	GCC	3	11½	4	CC	Wa	Zen	M	D-R	D-R	24
25	Ster. FD, FW170-7½, 9	200	230		10500		P 40x8	DP44x10	Wau AB	6-4½x5½	549	48.6	99-2000	L	GCC	GCC	3	11½	4	CC	Wa	Zen	M	D-R	D-R	25
26	Sterling FC170 7½, 9	200	230		10550		P 40x8	DP42x9	Wau RB	6-5x5½	677	60.0	125-2000	L	GCC	GCC	3	11½	4	CC	Wa	Zen	M	D-R	D-R	26
27	Stewart 27XS 7 Ton	6190	165	235	10300		B 10.50/24	DB10.50/24	Wau 6SRK	6-4½x5½	516	51.2	105-2000	L	GCC	GCC	3	12½	7	FP	On	Str	V	R-Bo	D-R	27
28	Walter FHS 7½ Ton	8000	Op	136	10000		B10.50/2	DB10.50/2	Own 6	6-4½x5½	549	48.6	110-1800	L	GCC	GCC	3	10½	4	PC	On	Str	V	R-Bo	D-R	28
29	Walter FHS 5-7 Ton	7600	Op	136	9000		B 9.75/24	DB9.75/24	Own 6	6-4½x5½	549	48.6	110-1800	L	GCC	GCC	3	10½	4	PC	On	Str	V	R-Bo	D-R	29
30	Ward-La France 50D-7	Op	Op	28000			P 40x8	DP40x8	Wau SRL	6-4½x5½	462	45.9	97-2000	L	GCC	GCC	3	12½	5	FP	No	Zen	M	D-R	D-R	30
31	Ward-La France 55B-6	Op	Op	28000			B 9.75/20	DB10.50/20	Lyc	8-3½x4¼	420	45	130-2800	L	GCC	GCC	3	12½	5	FP	No	Zen	M	D-R	D-R	31
32	Ward-La Fr. 75RW7½	Op	Op	28000			B 10.50/20	DB10.50/20	Wau RB	6-5x5½	677	60.0	140-2000	L	GCC	GCC	3	11½	4	FP	Wa	Zen	M	D-R	D-R	32
33	Ward-La Fr. 100RW10	Op	Op	34000			B 10.50/24	DB10.50/24	Wau RB	6-5x5½	677	60.0	140-2000	L	GCC	GCC	3	11½	4	FP	Wa	Zen	M	D-R	D-R	33
34	Witt-Will R55	1509			27000		B10.50/20	DB10.50/20	Con 21R	6-4½x4¼	427.5	45.9	100-2600	H	GCC	GCC	3	13½	7	FP	No	Str	M	D-R	D-R	34
35	Woods 105	6975	190	Op	8700		B 10.50/22	DB10.50/22	Her HXC	6-5x6	66.1	164-2000	L	GCC	GCC	3			7	PC	Ha	Zen	M	R-Bo	A-L	35
Six-Wheelers																										
36	Autocar G 10T	9000	171	238	36000	13000	P 36x8	DP36x8	Own	6-4½x4¼	453.0	48.6	101-2400	L	GCC	GCC	3	14½	7	FP	Pe	Str	V	D-R	L-N	36
37	Brookway 640, 10 Ton		212	224	40000	14000	P 38x7	S 36x10	Con	6-4½x5½	611.4	54.2	116-1800	L	GCC	GCC	3	13½	7	FP	Pe	Str	V	D-R	L-N	37
38	Chicago 1-56-D		174	222	35740	12740	B 9.75/20	DB9.75/20	Wau 6SRK	6-4½x5½	462	45.9	97-2000	L	GCC	GCC	3	13½	7	FP	No	Zen	M	A-L	A-L	38
39	(Z) Corbitt 208W6	Op	Op	22000	9000		B 7.50/20	DB7.50/20	Con 20R	6-4½x4¼	411.0	40.0	89-2400	H	GCC	GCC	3	13	7	FP	No	Zen	M	D-R	D-R	39
40	(Z) Corbitt 288W6	Op	Op	30000	10000		P 34x7	DP34x7	Con 21R	6-4½x4¼	427.5	45.9	100-2600	H	GCC	GCC	3	13	7	FP	No	Zen	M	D-R	D-R	40
41	(Z) Corbitt 368W6	Op	Op	35000	11500		P 36x8	DP36x8	Con 21R	6-4½x4¼	427.5	45.9	100-2600	H	GCC	GCC	3	13	7	FP	No	Zen	M	D-R	D-R	41
42	(Z) Corbitt 408W6	Op	Op	42000	13000		P 38x9	DP38x9	Con 16H	6-4½x5½	611.4	54.1	127-2000	L	GCC	GCC	3	13½	7	FP	No	Zen	M	D-R	D-R	42
43	Day Elder 285 8 Ton	5295	164	232	28500	12000	B 8.25/20	DB8.25/20	Con 21R	6-4½x4¼	427.5	45.9	100-2600	H	GCC	GCC	3	13½	7	FP	Co	Zen	V	D-R	D-R	43
44	Day Elder 345 10 Ton	6395	164	232	34500	12500	B9.00/20	DB9.00/20	Con 21R	6-4½x4¼	427.5	45.9	100-2600	H	GCC	GCC	3	13½	7	FP	Co	Zen	V	D-R	D-R	44
45	Day Elder 402 12 Ton	7495	164	232	40200	14200	B9.75/20	DB9.75/20	Con 16H	6-4½x5½	611.4	54.2	127-2000	L	GCC	GCC	3	13½	7	FP	Co	Zen	V	D-R	D-R	45
46	Diamond T. 801 4T	4140	189	219	21000	8000	P 36x8	DP36x8	Her YXC	6-4½x4¼	428.4	45.9	94-2200	L	GCC	GCC										

KEY OF REFERENCES

GENERAL

Gross Vehicle Weight—Chassis weight, plus body and cab, plus pay load.
Chassis Price is for truck with standard wheelbase listed and with tires listed F.O.B. factory, unless otherwise specified.

b—Price of Mack AC 7-10 ton, \$4,950, tires, 8 36x5, DS 40x5; 11-14 ton, \$5,500, tires, 8 36x6, DS 40x6; 15 ton, \$6,000, tires 8 36x7, DS 40x7.
(T)—Day-Elder 75-1 1/4 ton. Same specifications except price—\$945, and larger tire size—B6.00/20 front and DB6.00/20 rear.

(U)—Gottfredson-Rear Axle Model B800 also provided with 2412 EA-Car.

(V)—Hug 87M has wheelbase of 120 in. CS7 has wheelbase of 146, 154, 171 and 181.

(Y)—Chevrolet utility model with dual 30x5 rear tires lists at \$545.00.

(Z)—Larger engines and corresponding transmissions, clutches, axles, etc., provided on all models of Corbitt trucks when type of service requires them.

TIRES

B—Balloons.
DB—Dual Balloons standard equipment.
P—High Pressure Pneumatics standard equipment.
DP—Dual High Pressure Pneumatics standard equipment.
S—Solids.
DS—Dual Solids.
°—Pneumatics furnished at extra cost.

ENGINE

Bud—Buda Company.
Con—Continental Motors Corp.
Has—American Car & Fdy. Co.
Her—Hercules Motor Corp.
Lyc—Lycoming Motor Corp.
Wau—Waukesha Motor Co.
Wis—Wisconsin Motor Mfg. Co.

Valve Arrangement

H—In head.
L—"L" Head.
S—Sleeve.
T—"T" Head.

C—Chain.
G—Gear.

Camshaft Drive

Piston Material

A—Aluminum alloy.
B—Semi-steel.
C—Cast iron.
N—Nickel iron.
S—Aluminum alloy with strut.

Main Bearings

r—Rear main bearing.

Oiling System

CC—Pressure to main, connecting rod and camshaft bearings.
FP—Pressure to main, connecting rod, camshaft bearings and piston pins.
PC—Pressure to mains and connecting rod bearings.
PQ—Pump, gravity and splash.
PS—Pressure with splash.
SP—Circulating with splash.

Governor

Bf—Bethlehem Fabricators, Inc.
Bu—Buda.
Co—Continental.
Ha—Handy Governor Co.
HS—Amer. Car & Fdy. Co.
KP—Handy Governor Co.
Mo—Monarch.
No—Not supplied.
On—Own.
Op—Optional.
Pe—Pierce Governor Co.
Si—Simplex (Eisemann Magneto Corp.).
St—Sterling.
Wa—Waukesha.

Radiator

Bus—Bush Mfg. Co.
Chi—Chicago Mfg. Co.
Fed—Fedders Mfg. Co.
G&O—G & O Mfg. Co.
Har—Harrison Rad. Corp.
Hex—Hexcel Rad. Co.
Lon—Long Mfg. Company.
McC—McCord Rad. & Mfg. Co.
Mod—Modine Mfg. Co.
Per—Perfex Corp.
R-T—Rome-Turney Rad. Co.
You—Young Rad. Company.

FUEL SYSTEM

Carburetor Make

Car—Carter Carburetor Co.
Joh—Johnson.
Mar—Marvel Carburetor Co.
Sch—Wheeler Schebler Co.
Ste—Detroit Lubricator.
Str—Stromberg Motor Dev. Co.
Stw—Stewart.
Til—Tillotson Mfg. Co.
Zen—Zenith-Detroit Corp.

Fuel Feed

E—Electric Pump.
G—Gravity.
M—Mechanical Pump.
P—Pressure.
V—Vacuum.

ELECTRICAL SYSTEMS

A-Bo—Amer. Bosch Magneto Co.
R-Bo—Robert Bosch Magneto Co.
Apo—Apollo Magneto Corp.
D-R—Delco Remy Company.
Eis—Eisemann Magneto Corp.
L-N—Leece-Neville Co.
N-E—North East Elec. Co.
Spl—Splittorf Electrical Co.
I—Generator and Starter at extra cost.
2—Starter not supplied. Generator at extra cost.
3—Starter at extra cost.

CLUTCH

D—Multiple disk.
dp—Double Plate.
O—Plate in oil.
P—Single plate.

B&B—Borg & Beck Co.
B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
H-S—Merchant & Evans Co.
Jon—Jones Clutch & Gear Co.
Lon—Long Mfg. Company.
M-E—Merchant & Evans.
M-M—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
Roc—Rockford Drill Machine Co.
W-G—Warner Gear Co.

B&B—Borg & Beck Co.
B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
M-M—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
Roc—Rockford Drill Machine Co.
W-G—Warner Gear Co.

GEARSET

B-L—Brown-Lipe Gear Co.
Cla—Clark Equipment Co.
Cov—Covert Gear Co.
D-G—Detroit Gear & Mach. Co.
Ful—Fuller & Sons Mfg. Co.
M-M—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
W-G—Warner Gear Co.
War—Warner Corp.

Location

A—Amidships.
J—Unit with jackshaft.
U—Unit with engine.

Auxiliary, Location

No—Not furnished.
Op—Optional at extra cost.
A—Amidships.
R—Rear of amidships main transmission.
U—Unit with engine.

UNIVERSAL JOINTS

Blo—Blood Bros. Mach. Co.
B-C—Blood and Cleveland.
Cle—Cleveland Steel Prod. Corp.
Har—Spicer Mfg. Co.
M-M—Mechanics Machine Co.
PeS—Peters and Spicer.
Pet—Peters.
P-S—Peters and Sneed.
S-C—Spicer and Cleveland.
Spi—Spicer Mfg. Co.
S-P—Superior Universal Products Co.
SpB—Spicer and Blood Bros.
SpP—Spicer and Pick.
S-T—Spicer & Thermold.
U-M—Universal Machine Co.
U-P—Universal Products Co.

REAR AXLE

Cla—Clark Equip. Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salsbury Axle Co.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

Final Drive and Type

B—Bevel.
C—Chain.
D—Dead.
F—Full Floating.
H—Hypoid.
I—Internal Gear.
2—Double Reduction.
R—Relay—Pendulum Drive.
S—Spiral Bevel.
W—Worm.
W/2—Worm or Double Reduction Optional.
1/2—Semi-Floating.
3/4—Three-Quarter Floating.

Drive and Torque

A—Radius Rods and Torque Arm.
H—Hotchkiss.
R—Radius Rods.
T—Torque Arm.
U—Torque Tube.
O—Radius Rods Optional.

WHEELS DRIVEN

2C—Center pair of rear wheels.
2R—Rear pair of rear wheels.
4F—Front and center pair of rear wheels.
4R—Four rear wheels.
6—Six wheels.

FRONT AXLE

Shu—Shuler Axle Co., Inc.
Cla—Clark Equipment Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
Eat—Eaton Axle Co.
Sal—Salsbury Axle Co.
She—Sheldon.
Tim—Timken Det. Axle Co.
Wis—Wisconsin Axle Co.

BRAKES—Service

B—Bendix.
BE—Bendix front, Eaton rear.
BO—Bendix front, Own rear.
C—Columbia.
K—Clark.
L—Lockheed.
LO—Lockheed front, Own rear.
O—Own.
OE—Own front, Eaton rear.
OW—Own front, Wisconsin rear.
S—Steeldraulic.
T—Timken.
W—Wisconsin.
Ws—Westinghouse.

Make

Location

2—Two Wheel.
4—Four Wheel.
6—Six Wheel.
2/4—Two wheel brakes effective on all four wheels through driveshaft.
F—Driveshaft effective on four wheels.
J—Jackshaft.
P—Propeller shaft.
P/4—Propeller shaft effective on four wheels.
r—Four rear wheels.

Type

I—Internal.
Y—Internal front and external rear.
X—External.

Method of Operation

A—Air.
D—Hydraulic and mechanical.
H—Hydraulic.
M—Mechanical.
V—Vacuum.

BRAKES—Hand Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
R—Worm or bevel gear shaft.
T—Transmission.
F—Driveshaft.

Type

D—Disk.
I—Internal.
X—External.
Y—Internal front and external rear.

STEERING GEAR Make

CAS—Columbus G. & P. Co.
Gem—Gemmer Mfg. Co.
Han—Hannum Mfg. Co.
Jac—Saginaw Steering Gear Div. General Motors Corp.
Lav—Hannum Mfg. Co.
Ros—Ross Gear & Tool Co.
Woh—Wohlrab Gear Co.

FRAME

C—Channel.
I—"I" Beam.
P—Channel reinforced with plate.
T—Slide rails tapered front and rear.

SPRINGS—Auxiliary Type

1/2—Semi-elliptic above or below main springs.
1/4—Quarter elliptic.
C—Coil spring.

(X) **General Motors Trucks.** Gross vehicle weight indicated for each model in table is the *Straight Rating* (combined weight of chassis, body, equipment and payload) for which chassis is designed and guaranteed to satisfactorily operate under average conditions. The size of the tires used does not affect this Straight Rating, but to secure maximum tire mileage it is suggested that the total gross weight be limited to a "recommended gross weight" for each tire equipment (type number) based on tire capacity. Chassis prices vary with wheelbase and tire combinations. The range of "recommended gross weights," type numbers and resulting payload range (assuming nominal body allowance) for each model follows.
 Note: Models T-15 to T-61 inclusive, as well as Models TX and WX, are available for Export only as coach chassis.

MODEL	RANGE OF RECOMMENDED GROSS WEIGHTS (LBS.)	TYPE NUMBERS	RANGE OF PAYLOAD (TOL.)
T-15	4500 to 6500	1501 to 1708	1/2-1 1/2
T-18	6000 to 8200	181-1 to 187-20	1-2
T-19	7500 to 10000	2201 to 2223	1 1/4-2 1/4
T-25	6800 to 9000	2501 to 2518	1 1/4-2
T-26	8500 to 11000	261-1 to 2618-18	2-3
T-30	10000 to 12500	3201 to 3215	2-3
T-31	11000 to 14000	311-1 to 315-9	2 1/2-4
TX-186 1/2	14000	Export Coach	.....
WX-185	14500	Export Coach	.....
T-42	12000 to 15000	4201 to 4212	2 1/4-4
T-44	12000 to 16000	4401 to 4412	3-4 1/2
T-45	13500 to 16000	451-1 to 455-10	3-4 1/2
WX-215	17000	Export Coach	.....
T-61	16500 to 19000	511-1 to 517-13	4-5 1/2
T-55	16500 to 19000	551-1 to 557-13	4-5 1/2
T-60	18500 to 22000	6201 to 6218	5-6 1/2
T-61	19500 to 22000	611-1 to 619-8	5-6 1/2
T-82	19000 to 24000	8201 to 8212	5-7
T-83	20000 to 24000	831-1 to 837-8	5-7
T-85	25000 to 30000	851-1 to 859-9	6-8
T-90	22000 to 28000	9001 to 9007	5-7 1/2
T-95	30000 to 40000	951-1 to 956-9	7-11
T-96	28000 to 34000	961-1 to 965-8	7-9